



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

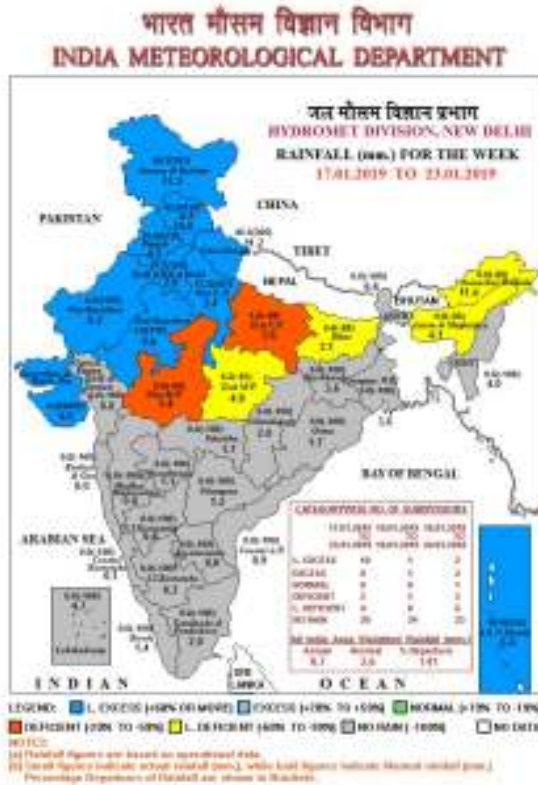
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Realized Rainfall and Extended Range Forecast (Rainfall and Temperatures)

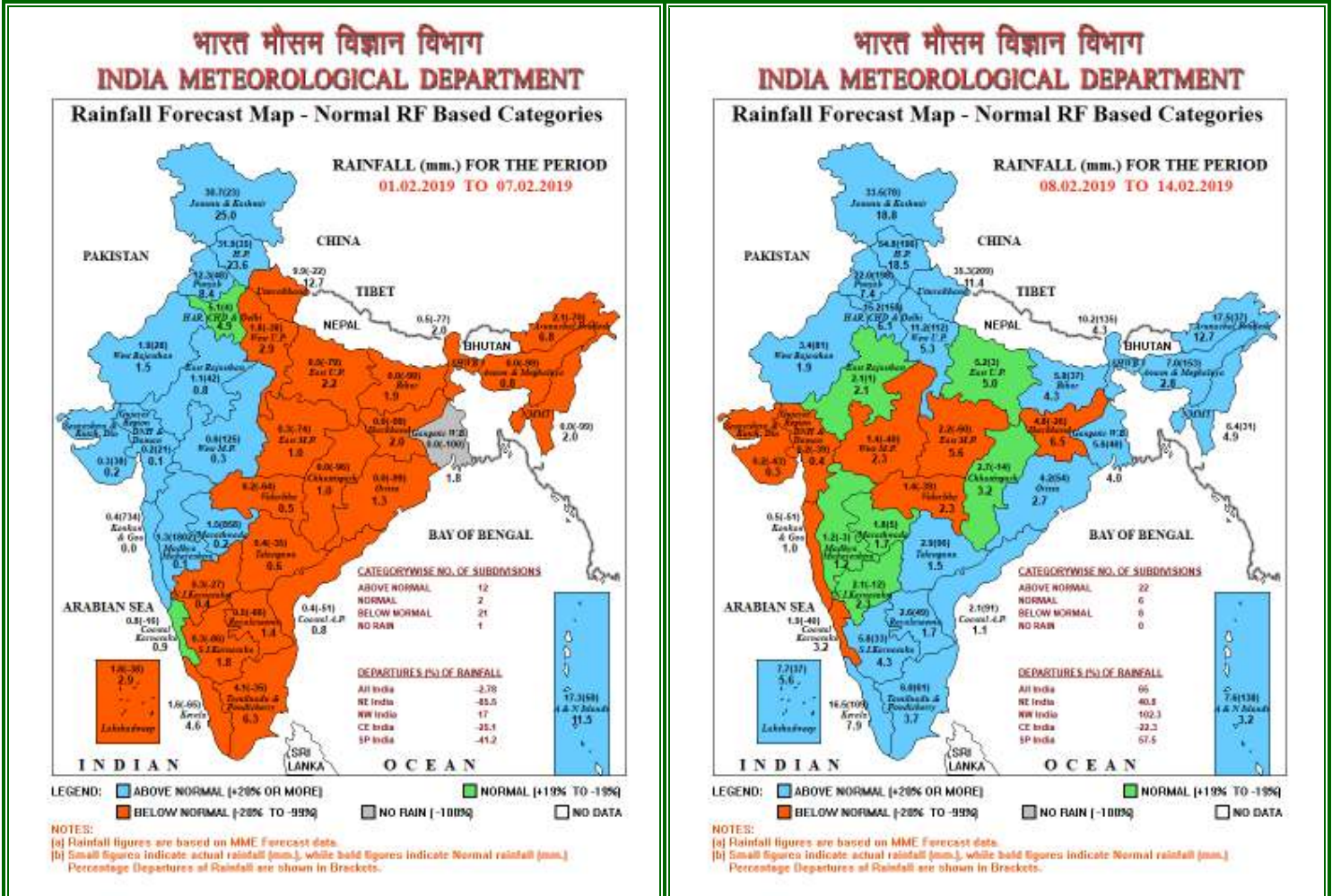
Realized Rainfall (17th to 30th January 2019)



- Normal or above normal rainfall occurred in both the weeks in Uttarakhand and Rajasthan.
- Normal or above normal rainfall occurred in either of the two weeks in Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, East Uttar Pradesh, Bihar, Chhattisgarh, East Madhya Pradesh, Vidarbha, Saurashtra & Kutch, South Interior Karnataka, North Interior Karnataka, Andhra Pradesh, Rayalaseema, Telangana, Tamilnadu and Andaman & Nicobar Islands.
- Below normal rainfall / no rain occurred over rest of the country.

Extended Range Forecast System

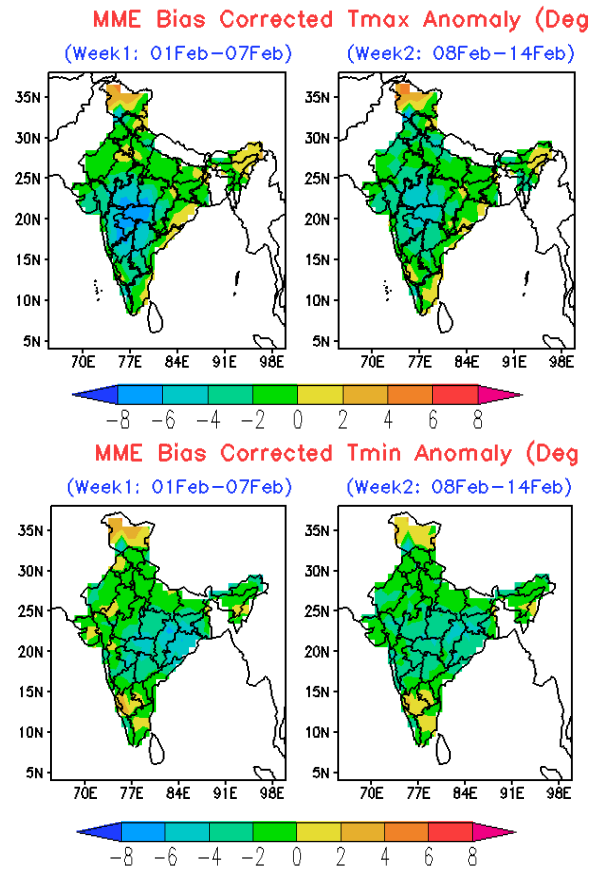
Rainfall forecast maps for the next 2 weeks (IC – 30 January) (1st to 14th February 2019)



Extended Range Rainfall Forecast

- Week 1 (01.02.2019 to 07.02.2019) and Week 2 (08.02.2019 to 14.02.2019):** Rainfall associated with Western Disturbance over extreme north India and adjoining eastern parts (Uttarakhand, Uttar Pradesh, Bihar and north-east met-subdivisions. Southern part of Bay of Bengal, Srilanka and adjoining Tamil Nadu will be active during the period.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 30 January)
(1st to 14th February 2019)**



Maximum Temperature (Tmax)

- **Week 1 (01.02.2019 to 07.02.2019) and Week 2 (08.02.2019 to 14.02.2019):** Except isolated regions over extreme north India, eastern coastal belts and north east India, Tmax will be below normal over India.

Minimum Temperature (Tmin)

- **Week 1 (01.02.2019 to 07.02.2019) and Week 2 (08.02.2019 to 14.02.2019):** Mostly below normal Tmin over the country during except some parts of extreme north India (Jammu & Kashmir, Punjab) and isolated pockets over southern peninsula.

Strategic Agricultural Planning based on rainfall during next two weeks till 14th February 2019

Agromet Advisories

Kerala

Amount of rainfall received during the period from 01 to 31 January 2019 over Kerala is 0.7 mm (92% deficit). The extended range weather forecast provided for next two weeks (01 to 07 and 08 to 14 February) is below normal for week-1 and above normal for week-2.

- Fruit fly is observed in bitter gourd. Setting up of pheromone trap (Cue lure @1/15 cent) Spot application of 10 % jaggery containing 0.1 % malathion @1 spot/40 m² on underside of leaves at fortnight intervals is advised.
- There is a chance of aphids in cowpea. Apply 2% neem oil emulsion or apply 20 g *Verticillium lecanii* per one litre of water in 10 days intervals. If aphid attack is severe, apply 3 ml Imidacloprid or 2 g Thiamethoxam per 10 litre of water.
- Destroy the affected leaves along with the Spodoptera in Banana. If Spodoptera attack is severe, spray quinalphos 2ml per one litre of water or chlorantraniliprole 3 ml per 10 litre of water.

Karnataka

Amount of rainfall received during the period from 01 to 31 January 2019 over North Interior Karnataka is 0.8 mm (61 % deficit), over South Interior Karnataka is 1.0 mm (25% deficit) and no rain over Coastal Karnataka. The extended range weather forecast provided for 01 to 07 and 08 to 14 February over North Interior Karnataka is below normal for week-1 and normal for week-2, over South Interior Karnataka is below normal for week-1 and above normal for week-2 and over coastal Karnataka is normal for week-1 and below normal for week-2.

South Interior Karnataka

- Due to continuous dry spell since October month, the termite attack is common in horticulture and Forestry tree and shrubs hence control to apply Aldrin termiticides for control of termites.
- To protect the pulse grains from storage pests apply oils of Castor/ linseed/honge/neem oil @ 3-5 ml per kg of grains.
- One protection irrigation may be provided to rabi crops in order to meet the soil moisture requirement of the crops.

Tamil Nadu

Amount of rainfall received during the period of 01 to 31 January 2019 over Tamil Nadu is 2.1 (88% deficit). The extended range weather forecast provided for next two weeks (01 to 07 and 08 to 14 February) is below normal for week-1 and above normal for week-2.

- Prevailing weather condition is favorable for Leafhopper, Mealy bug and Stem weevil incidence in cotton. To control sucking pest, spray Imidacloprid 200 SL 100 ml/ha or Fipronil 5%SC 1500-2000 ml/ha. To control mealy bug incidence spray NSKE 5% or FORS 25gram/litre.
- Climatic condition is favourable for Thrips and Mite infestation in chilli. To control thrips, spray any one of the following insecticide, imidacloprid 17.8 % SL 3.0 ml/10 litre.

Maharashtra

No rainfall received during 01 to 31 January 2019 over different meteorological sub divisions of the state viz., Konkan, Madhya Maharashtra and Marathwada. Amount of rainfall received over Vidarbha is 10.9 mm (13% excess). The extended range weather forecast provided for next two weeks (01 to 07 and 08 to 14 February) over Konkan, Madhya Maharashtra and Marathwada is above normal and over Vidarbha is below normal for week-1 and normal over Madhya Maharashtra and Marathwada, below normal over Konkan and Vidarbha for week-2.

Marathwada

- For management of pod borer in late sown chickpea crop, spray of Quinalphos 25 % @ 400 ml or Emamectin benzoate 5 % @ 80 g per acre.
- Due to decrease in minimum temperature infestation of disease may increase in banana orchard to control take a spray of fungicide.
- Due to variation in weather i.e. low temperature during early morning and bright sunshine during afternoon may affect the quality of grapes. Hence, to protect use paper bags to cover it.
- For management of field rats during grain filling stage in wheat crop prepare a mixture with 1 part Zinc Phosphide + 1 part Jaggery + 50 parts wheat flour and edible oil. Apply this mixture in the burrows and close them.

Madhya Maharashtra

- Give protective irrigation to drumstick crop and use crop residue for mulching to conserve soil moisture.
- To control powdery mildew and mango hoppers on bloomed mango, spray Imidacloprid (17.8 SL) 3- 4 ml + Sulphur 80 WP 25 gm per 10 L water.
- Rabi sorghum is at harvesting stage so it should be harvested, threshed and store (moisture should not more than 10%) it after 2-3 sun drying by mixing it with 1-2 % dried neem leaf.

Vidarbha

- For control of aphids in wheat undertake spray of dimethoate 30 EC @ 500 ml or methyl demeton 25 EC @ 400 ml in 500 litres of water, after forecasted spell of rains.
- Sowing of summer groundnut (TAG 24, SB-11) can normally be undertaken from second fortnight of January as cold weather subsides to first week of February.
- Apply need based irrigation to avoid soil moisture stress condition during pod formation stage in later sown chickpea.

Chhattisgarh

Amount of rainfall received over Chhattisgarh during 01 to 31 January 2019 is 14.4 mm (41% excess). The extended range weather forecast provided for next two weeks (01 to 07 and 08 to 14 February) is below normal for week-1 and normal for week-2.

- If yellow mosaic disease observed in pulses crop then destroy the affected plant and spray Metasystax or Rogor insecticide @1 ml/litre water.

- Looking to the cloudy weather condition which prevailed during past days aphids in vegetables, fruit and shoot borer in brinjal may occur. Hence, farmers are advised to keep keen watch over the crops and adopt integrated pest management practices like light trap, pheromone trap for initial control.
- To control broad leaved weeds in late sown wheat apply Metsulfuron @ 8 grams +200 litre water at 20-25 day after sowing or spray 2,4-D Na Salt 500 gm per acre. +200 liter water at 25-30 day after sowing.
- To gain more production give 25-30 kg green fodder per day to milch animals. Ratio of 3:1 for green and dry fodder can be kept.

Odisha

Amount of rainfall received over Odisha during 01 to 31 January 2019 is 1.3 mm (88 % deficit). The extended range weather forecast provided for next two weeks (01 to 07 and 08 to 14 February) is below normal for week-1 and above normal for week-2.

- Farmers are advised to complete the sowing of summer groundnut and sunflower by this week. Use 60 kg pods per acre.
- Spodoptera in cabbage and cauliflower crops. Alternate spraying of B.T product 1 kg or 250 LE SLNPV/acre at weekly interval or use 4 Trichogramma cards per acre.
- Aphid infestation has been found in potato. Spray 4 ml neem based pesticides or 2 ml Metacystox or 2 ml Rogor per litre water.
- Current cloudy and rainy weather favours the infestation of aphids and thrips in rabi groundnut, spray 400 ml Dimethoate or 50 ml. Imidacloprid in 200 ml litre water per acre. Rabi groundnut should be sprayed with 500g Blitox-50 powder in 200 litre water to control Tikka disease.

Uttar Pradesh

Amount of rainfall received over East Uttar Pradesh region is 11.7 mm (29% deficit) and West Uttar Pradesh is 15.6 mm (12% deficit) during 01 to 31 January 2019. The extended range weather forecast provided for two weeks (01 to 07 and 08 to 14 February) for West Uttar Pradesh is below normal for week-1 and over East Uttar Pradesh is below normal for week-1 and normal for week-2.

- Weather will be dry during this week, therefore, farmers are advised to irrigate wheat crops as per need.
- Irrigation should be taken up at tillering / PI which is critical stages of the wheat crop. Top dress ¼ Urea at PI stage.
- In Barley crop, top dress 30 kg/ha Urea in rain-fed areas at optimum moisture condition.
- For protection of Pea from Pod borer and Semi lopper, spray Fenvalerate 0.4% DP 20-25 kg/ha or Quinalphos 20% EC 2.0 litre/ha or Malathion 50 % Ec 2.0 litre/ha with 500 to 600 litre water . Spray Soluble Sulfur (80%) 2.0 kg/ha or Trademark 80 %EC with 500-600 litre. water solution to protect from Powdery mildew.
- Watch for aphid in mustard crop. If seen, spray Chlorpyriphos 20% EC @ 1.0 litre/ha or monochrotophos 36 % S.L. @ 500 ml/ha with 500-600 litre of water solution.
- Dig out early sown potato crop. Take precaution from late Blight and Aphid , spray Copper oxichloride 3.0 kg/ha with 700-800 lt. water solution or 2.0 g /litre water Mancozeb.

Bihar

Amount of rainfall received over Bihar is 5.1 mm (61% deficit) during 01 to 31 January 2019. The extended range weather forecast provided for next two weeks (01 to 07 and 08 to 14 February) is below normal for week-1 and above normal for week-2.

- In view of dry weather, harvesting of matured crop of elephant foot yam and turmeric is advised on priority basis.
- Give 3rd irrigation in the timely sown wheat crop which is in 60-65 days stage. Spraying of mixture of 2.5 kg zinc sulphate, 1.25 kg lime and 12.5 kg urea in 500 liters of water per hectare is advised in late sown wheat crop.
- Regular monitoring is advised for attack of cut worm in late sown potato crop. After formation of the tuber, the larvae cut holes in the tuber and consume their contents. If infestation is observed in the crop field, spraying of Chlorpyrifos 20EC@2.5-3 ml per litre of water is advised.
- Regular monitoring is advised for infestation of pod borers in pigeon pea. If infestation is found, spraying of Cartap hydrochloride @ 1.5ml/litre of water is advised.

West Bengal

No rainfall received over Gangetic West Bengal during 01 to 31 January 2019. The extended range weather forecast provided for next two weeks (01 to 07 and 08 to 14 February) is no rain for week-1 and above normal for week-2.

- As no rainfall is predicted in general light irrigation is advocated for the existing crop like potato, pulses, mustard.

Jharkhand

Amount of rainfall received over Jharkhand during 01 to 31 January 2019 is 1.2 mm (93 % deficit). The extended range weather forecast provided for next two weeks (01 to 07 and 08 to 14 February) is below normal for both the weeks.

- Farmers who wish to cultivate summer vegetables, specially cucurbitaceous vegetables like sponge gourd, Bottle gourd, pumpkin, water melon, musk melon etc. may sow the seeds of these vegetables in pit and maintain the distance between two pits.
- Timely sown crops are at pod formation stage. If the crops are attacked by pod borer insect, spray insecticide Monochrotophos @ 1 ml per litre of water. However farmers, wishing to sell green pod of gram/pea may spray bioinsecticide like delphin @ 2 gm per litre of water.
- Broadcast urea in 10 - 12 days old seedlings @ 2 kg per 10 dismil of nursery bed of summer rice, so that after 10-15 days these seedlings may be transplanted in the main field and also maintain the soil moisture of nursery bed.

Rajasthan

Amount of rainfall received over West Rajasthan is 5.3 mm (94% excess) and over East Rajasthan is 5.9

mm (13 % excess) during 01 to 31 January 2019. The extended range weather forecast provided for next two weeks (01 to 07 and 08 to 14 February) for West Rajasthan is above normal for both the weeks for East Rajasthan is above normal for week-1 and normal for week-2.

- Due to low temperature in coming days to avoid frost injury apply irrigation, spray 0.1 % H₂SO₄ and fumigation on field at evening time. Use crop & weed residue for fumigation.
- Apply 30 kg nitrogen in late sown wheat where the crop is at tillering stage.
- Spray wettable sulphur 80 WP @ 2gram/litre of water in mustard for the control of powdery mildew.
- For the control of gram pod borer at 50% flowering stage, spray of NPV 250 LE 1 ml /litre water and second spray at 15 days BTK Dipel 8L 1.5 litre/ha.
- Top dressing of 1/4th of nitrogen (65 kg Urea) in opium poppy at flowering stage & spray Ridomil @3g/litre of water to control downy mildew.

Assam

Rainfall received over Assam is 2.4 mm (85% deficit) during 01 to 31 January 2019. The extended range weather forecast provided for next two weeks (01 to 07 and 08 to 14 February) is below normal for week-1 and above normal for week-2.

- Farmers may observe aphid attack in rapeseed & mustard crop. To control this pest, spray Dimethoate 30EC or Chloropyrifos 20EC 0.5lit/ha with a spray volume of 500-700lit of water/ha.
- **Okra:** Farmers are advised to collect recommended varieties like Pusa Sawani, Arka Anamika, Parvati Kranti or other local varieties. Land preparation may be started for growing okra as a spring summer crop (January-March). Select well drained sandy loam to clay loam soil rich in organic matter.
- **Coconut:** Nuts harvested during November can be sown in nursery bed for raising seedling. In 1m wide nursery beds, the nuts should be placed at a spacing of 30cm x 30cm.

Haryana

Rainfall received over Haryana is 15.2 mm rainfall (10% deficit) during 01 to 31 January 2019. The extended range weather forecast provided for next two weeks (01 to 07 and 08 to 14 February) is normal for week-1 and above normal for week-2.

- Due to Western Disturbances, farmers are advised to temporarily withhold irrigation and chemical spray till 1st February in mustard, wheat and gram crop.
- Farmers are advised to keep on vigilance for insect/pests in sugarcane crop. Temporarily withhold irrigation in berseem crop till 1st February.
- Due to fall in night temperature, high winds and cloudy conditions keep the animals under shed. Keep proper arrangement to keep warm in shed.

Himachal Pradesh

Himachal Pradesh has received 81.9 mm of rainfall during 01 to 31 January 2019, which is 12% deficit. The extended range weather forecast provided for next two weeks (01 to 07 and 08 to 14 February) is

above normal for both the weeks.

- Intercultural operations are advised in already sown berseem and oats for fodder in Rabi season.
- Borer insect can affect vegetables like brinjal, cauliflower, cabbage and tomato. Farmers are advised to use pheromone trap.
- Apply mulch and well rotten FYM on ginger, turmeric, colcasia and leafy vegetables.
- Advised planting of onion bulbs in 30x10 cm spacing.
- It is optimum time for raising the nursery of winter flowers in poly-houses.
- Farmers are advised to start earthing-up in potato if crop has attained a height of 15-22 cm.

Uttrakhand

Uttrakhand has received 74.8 mm of rainfall during 01 to 31 January 2019, which is 51% excess. The extended range weather forecast provided for next two weeks (01 to 07 and 08 to 14 February) is below normal for week-1 and above normal for week-2.

- Keeping in view of rainfall/snowfall during last few days, farmers are advised to stop irrigation, fertilizer/chemical application for next few days as sufficient moisture is available in all the crops.

Jammu

Rainfall received during 01 to 31 January 2019 over Jammu is 135.2 mm, which is 47% excess. The extended range weather forecast provided for next two weeks (01 to 07 and 08 to 14 February) over Jammu is above normal for both the weeks.

- Apply 2nd top dressing of urea in normal sown and 1st top dressing of urea in late sown wheat crop.
- Temperature and RH is favorable to alternaria blight and aphid attack in mustard. Spray mancozeb @ 0.25% to control alternaria blight.
- Due to prevailing weather conditions monitor *rabi* pulse crop for wilt and blight attack, if observed apply Bavistin/carbendazim @ 3gram/litre of water.
- Prepare fields for solanaceous and cucurbitaceous vegetable crops. Apply FYM @ 10qntl/kanal at the time of field preparation along with recommended dose of chemical fertilizers.

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