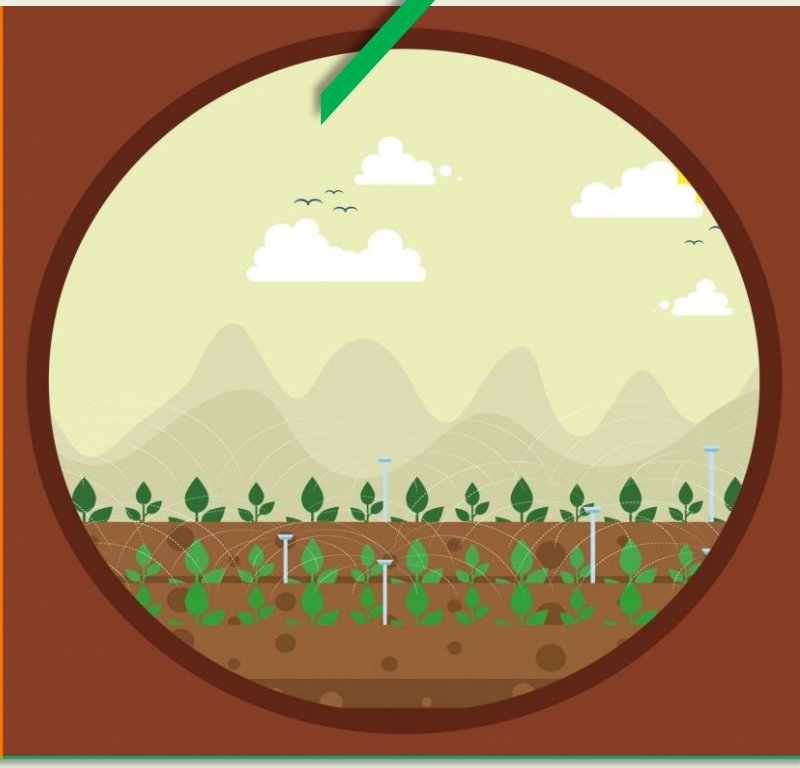
Stress Management Agro-Advisory for the State of Maharashtra

Oct 30 – Nov 12, 2026



Compiled & Edited by :
RN Singh, Scientist (Agricultural Meteorology)

Advisory Committee:
KK Pal, NP Kurade, S Kochewad, V Salunkhe, Neeraj Kumar, Sonam, Rajkumar, Aliza Pradhan, PS Khapte, Vijay Kakade, Pravin Taware & Sunil Potekar

Technical Support :
Pravin More, Senior Tech. Officer (Computer)

ICAR-National Institute of Abiotic Stress Management
Baramati, Pune, Maharashtra

Managing Abiotic and Biotic Stresses in Agriculture
Agro-Advisory for the State of Maharashtra
(Oct 30 – Nov 12, 2026)

Advisory No.: NIASM/MH/26-14 **Date: Oct 29, 2026**

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1. Weather Forecast (India Meteorological Department, New Delhi)

1.1. Rainfall

- No rainfall is expected across the state during the next two weeks.

1.2. Temperature

- The maximum temperature is likely to range between 28–32ºC, remaining 1–2ºC below normal in most parts of the state.
- The minimum temperature is expected to range between 18–22ºC during the first week and 16–20ºC during the second week, remaining 1–2ºC above normal in the first week and near normal in the second week.

2. Managing Abiotic Stresses

2.1. Atmospheric Stresses

2.1.1. Crops

- **Grape:** Complete forward pruning during this period. The pruning need to be staggered by following local weather forecast.
- **New Plantations:** In case of newly planted orchards, support the plants by tying them straight using bamboo sticks to avoid damage due to hot sun and heavy winds. To avoid sunburn to saplings, protect them from bright sun with the help of temporary shade.
- **Dragon fruit:** Remove overgrown and the damaged shoots after harvesting fruits.

2.1.2. Livestock

- Repair roofs of the animal sheds wherever necessary to ensure protection for animals from rains.
- Keep the animals indoor during thunderstorm/ lightening events.
- To protect livestock from extreme weather events and storms, keep the animals indoor during night hours.
- Avoid overcrowding of animals in livestock shed.
- Control of ecto-parasites and endo-parasites should be carried out.
- The floor of the animal shed should be kept clean and dry.
- Maintain the surrounding of animal shed clean and hygienic and remove the unwanted vegetation nearby the sheds.

2.2. Water Stresses

2.2.1. Crops

- **Grape:** Pre-pruning water stress for 10-15 days is mandatory to encourage natural defoliation, therefore withhold irrigation during pre-pruning period.

- **Pomegranate:** Avoid any irrigation water imbalance in *Mrig bahar* orchards near maturity, to avoid fruit cracking.

2.2.2. Livestock

- Store feed and fodder in dry, well-ventilated areas to prevent mould growth and spoilage.

2.2.3. Fisheries

- Monitor the water quality parameters viz. dissolved oxygen (6.0-7.0 ppm), pH (7.0-8.5), ammonia (0.05 ppm), nitrate (50-150 ppm), nitrite (0.1 ppm), CO2 (less than 10 ppm), and H2S (0.002 ppm) in fish pond carefully.
- Enhanced the feed and feeding rate @ 3-5 % of the body weight of the fishes
- Observe the average daily growth rates of fish
- Measure turbidity of the pond water with the Secchi disc for maintenance of pond water transparency (30-45 cm)
- Construction of new pond, strengthening of embankment and side slopes may be completed during March-May with optimum depth of 2.0-3.0 m with 1.5 m water holding capacity throughout the year.
- Application of powdered lime in pond bottom @ 120-130 kg/ha and after 10 days of lime application water may be filled in the fish pond
- Apply cowdung @ 0.75-1.0 ton/ha after lime application in corner of the pond
- Cow dung, urea and SSP application only done after pond is filled with water

2.3. Soil Stresses

- **Grape:** Supply 80Kg N per ha through drip irrigation during 1 to 20 days after forward pruning.
- **All orchards:** It's time for tillage in between rows and soil pulverization in the plant basins to break top-soil compaction, to improve soil aeration and weed management

3. Managing Biotic Stresses

3.1. Crops

- **Grape:** Spray Imidachloprid 200SL @ 0.8 ml L^{-1} immediately after pruning to control damage of sprouting buds by flea beetle. Prophylactic spray Cymoxanil 8% + Mancozeb 64% @ 1.5 g L^{-1} at three leaf stage to be done for control of Downy mildew infection.
- **Sweet orange:** To manage fruit sucking moth, destroy all the fallen fruits by burying in the pit and poison baiting with 10 ml Malathion mixed with 100 g jaggery and 100 ml Orange juice in 900 ml water (in two bottles per 25 trees). To control fruit fly use male attracting trap containing methyl eugenol @ 20 traps/ hectare from 60 days before fruit harvest and change the lure every 30 days.
- **Guava**: Use pheromone trap bottles containing 100ml solution of 0.1% Methyl eugenol and 0.1 Malathion for integrated management of fruit fly pest. Tie the trap bottles at 1.5 to 2 meter height in orchard @ 8 Nos/ ha.
- **All vegetable crops:**

➢ To avoid incidence of disease and pest in solanaceous vegetable crops, maintan optimum /recommended plant spacing.

➢ Procure healthy and disease-free seedlings from certified nursery only.

- Spray liquid formulation of *Trichoderma* sp. @ 5ml/litre as a preventive measure for effective management of diseases
- To manage soil-borne pathogens, apply *Trichoderma* sp. + *Pseudomonas* sp. @ 1litre/acre through drip irrigation system.
- Follow integrated pest and diseases management practices such as disease-free seedlings from certified nursery, drenching with copper oxychloride @ 2.5 g/L of water to avoid post-transplanting damping-off in addition to use of systemic insecticides like Imidacloprid @ 0.5 ml/L to manage sucking pests.

3.2. Livestock

- There is a very high risk (VHR) of Haemorrhagic Septicaemia (HS) in the Dhule district and VHR of Black Quarter (BQ) in Ahilyanagar district. There is a very high risk (VHR) of Anthrax in the Ahilyanagar, Dhule, Kolhapur, Latur, Mumbai, Nanded, Pune, Sangli and Solapur districts
- Affected animals may be isolated and treated with suitable antibiotics, and vaccination is to be done in consultation with the local veterinarians.
- There is a very high risk of Peste des Petits Ruminants (PPR) in Ahilyanagar, Nashik and Pune districts. There is a VHR of Foot and Mouth Disease (FMD) in Ahilyanagar and Kolhapur districts. There is a VHR of Lumpy Skin Disease (LSD) in Bid district. There is a very high risk (VHR) of Bluetongue in Kolhapur, and Dharashiv districts. There is a very high risk (VHR) of African Swine Fever in Ahilyanagar, Amaravati and Solapur districts. There is a VHR of Sheep and Goat Pox Disease in Ahilyanagar district.
- Vaccination for FMD, PPR, LSD, ASF and Sheep and Goat Pox in the concerned districts may be done in consultation with the local veterinarians.
- There is a very high risk of Theileriosis in Akola, Bid, Pune and Sangli districts. There is a very high risk of Trypanosomiasis in Dhule, Latur, Nandurbar, Palghar, Pune, Ratnagiri, Solapur and Thane districts. There is a very high risk of Fasciolosis in Akola district.
- Ensure 100% vaccination with timely boosters for PPR, HS and LSD alongside routine testing in VHR districts to enable early disease detection.
- Enforce strict biosecurity protocols, including controlled farm access, equipment disinfection, and quarantine for newly introduced animals.
- Control vector populations through integrated management practices, including tick control, fly-proof shelters, and molluscicide use in snail-infested areas.
- Monitor animals for any sickness, particularly related to digestive, dermal, or respiratory problems, and treat them by consulting a veterinarian.
- Regular deworming should be carried out by consulting local Veterinarians.
- For treatment of ectoparasitic infestation, dipping (if not done during the last three months) needs to be carried out with Ectomin/Butox, post-shearing on sunny days.
- Anti-parasitic drugs should be used under the guidance of a veterinarian.
- Spot the sick animals and isolate them in a separate shed for treatment.

4. General

- **Grape:** Immediately after forward pruning paste distal 2 buds of the canes with Hydrogen cyanamide 1.0 to 1.5% solution depending on cane thickness for selective &

enhanced bud burst. Shoot thinning should be carried out immediately after the inflorescence becomes visible. Retain 10-12 shoots per square meter.

- **Foliar spraying:** Use good quality water for spraying of agrochemicals preferably neutral or slightly acidic. If water is alkaline (pH~8), use Citric acid @ 0.5 g/L, to increase spray efficacy.

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