ICAR-NATIONAL RESEARCH CENTRE FOR GRAPES, Manjri, Pune.

WEATHER DATA FOR THE PREVAILING WEEK

Thursday (30/01/2025) – Wednesday (05/02/2025)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min-Max	R H%
	Min	Max				
Nashik	11-16	27-33	Nashik, Ozar, Kalwan, Pimpalgaon Baswant, Dindori, Palkhed, Loni, Vani – Thu – Wed – No Rain.	Clear to cloudy	6-18	19-54
Pune	15-18	31-34	Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Patas, Yavat, Narayangaon, Baramati, Indapur – Thu – Wed – No Rain.	Clear to cloudy	5-17	22-41
Solapur	14-22	33-34	Tuljapur, Ausa, Vairag, Barshi, Solapur, Pandharpur, Nannaj, Latur – Thu – Wed – No Rain.	Clear to cloudy	8-22	18-32
Sangli	14-19	34-35	Sangli, Walva, Palus, Kawtha, Miraj, Palsi, Shirguppi, Khanapur Vita, Shetphal – Thu – Wed – No Rain.	Clear to cloudy	5-14	22-33
Vijayapura	12-18	30-32	Chadchan, Tikota, Telsang, Vijayapura – Thu–Wed –No Rain.	Clear to cloudy	10-17	15-40
Hyderabad	17-21	33-35	Hyderabad, Medchal, Zahirabad – Thu–Wed –No Rain.	Clear to cloudy	4-17	21-29
Satara	14-19	32-33	Satara, Khatav, Phaltan – Thu – Wed – No Rain.	Clear to cloudy	5-15	26-32
Ahmednagar	14-19	30-34	Sangamner, Rahata, Kopargaon Karjat, Ahmednagar, Shrigonda, Akole, Jamkhed – Thu – Wed – No Rain.	Clear to cloudy	8-25	21-33
Jalna	16-19	31-34	Ambad, Ghansavangi, Jafrabad, Mantha, Jalna – Thu – Wed – No Rain.	Clear to cloudy	7-18	23-30
Buldhana	14-19	29-33	D.raja, Sindkhed, Buldana, Chikhli –Thu–Wed –No Rain.	Clear to cloudy	6-24	24-38
Kolhapur	18-20	33-36	Kagal, Karveer, Gagan-bavada – Thu–Wed –No Rain.	Clear to cloudy	8-17	21-31

Bengaluru Rural	14-18	30-32	Anekal, Doddaballapur, Bengaluru -east, Bengaluru-north, Bengaluru – Thu–Wed – No Rain.	Clear to cloudy	8-16	13-44
Belagavi	12-17	33-34	Belagavi, Chikodi, Athni, Gokak–Thu–Wed –No Rain.	Clear to cloudy	7-11	18-34
Bidar	17-18	34-36	Basavakalyan, Humanabad, Bidar – Thu –Wed –No Rain.	Clear to cloudy	5-14	18-31
Bagalkot	17-21	33-35	Bagalkot, Jamkhandi, Hungund, Mudhol – Thu –Wed –No Rain.	Clear to cloudy	6-21	16-31

Note: Above weather information is summary of weather forecasting given in following websites

https://www.wunderground.com/?cm_ven=cgi

https://imdagrimet.gov.in/weatherdata/BlockWindow.php

https://www.timeanddate.com/weather/india

ICAR-National Research Centre for Grapes does not claim accuracy of it.

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II. Water management

a. Number of days after Fruit pruning: 136

b. Expected Pan evaporation: 4 to 6 mm

Amount of irrigation advised :

1. In case the soil is under wapsa (field capacity) condition, donot irrigate the vineyard.
2. Practice mulching to keep the bunds moistened. This will reduce the salinity build up in the root zone due to evaporation of the moisture from the surface of the bund.
3. During Berry development to harvest stage, apply irrigation through drip @ 6800 - 10200 L/ acre/ day for all grape growing regions.

Soil and Nutrient management :

1. In early maturing and coloured varieties with possible reduction in temperature, possibility of berry cracking/ cracking of berries near the pedicel can be there. If the harvesting is scheduled with in 30 days, do not go in for application of boron and calcium. The application should be subject to

deficiencies observed in the vineyard. Focus on canopy density and regulate accordingly. If cracking is there, then control secondary infections (disease and fruit flies).

2. Unnecessary sprays should be avoided as the leaf health is bound to affect the photosynthate formation. This will impact bunch development.
3. With the temperature likely to be low in coming week, apply 15 kg SOP in two splits and follow it up with SOP spray for building up the potassium levels in the vines.

Berry Development stage:

1. After 6-8 mm berry size, start application of nitrogen in the form of ammonium sulphate @ 25kg /acre in 4 splits in calcareous soil and as urea @ 15 kg/acre in other soils in 3 splits. Follow this up with Sulphate of potash or 0-0-50 @ 25 kg/ acre in 3-4 splits for next two weeks.
2. Apply magnesium sulphate through drip @ 10kg/acre from 8-10mm berry size.
3. Foliar spray of sulphate of potash @ 3g/acre at 8-10mm berry size.
4. If soils are calcareous, then apply zinc sulphate and ferrous sulphate @ 5 kg/acre at 65-70 days after pruning.
5. Possibility of powdery mildew infection. Build up potassium levels in grapevine either through foliar spray @4-5 gm SOP/L and drip @ 15 kg SOP/L if not applied since last 20 days.

Ripening to Harvest stage:

1. Apply Sulphate of potash or 0-0-50 @ 25 kg/ acre in 3-4 splits for next two weeks. Follow this up with Magnesium sulphate @ 10 kg/acre in two splits.
2. Spray Magnesium sulphate and potassium sulphate @ 4g/L in calcareous soil.
3. Possibility of powdery mildew infection. Build up potassium levels in grapevine either through foliar spray @4-5 gm SOP/L and drip @ 15 kg SOP/L if not applied since last 20 days.
4. Manage canopy for adequate sunlight and air movement within the canopy for avoiding/ minimizing problems of berry cracking.

III. Canopy Management

Based on the present weather condition, following suggestions are offered.

1) The vineyard from Veraision to harvest stage:

The vineyard in veraision stage need sufficient irrigation for berry development. The increase in berry size till harvest will be 2-3 mm depending upon the soil and irrigation quality and weather condition available during this period. The developing bunches should be brought into the canopy shade to maintain

uniform colour of a bunch. Sufficient irrigation in the vineyard will help for development of natural bloom on the grape berries thus improving the shelf life.

In case of coloured varieties, application of ethephon @ 0.35 to 0.40 ml/L water to achieve uniform colour will be sufficient. Excess concentration may lead to reduction in shelf life. Maintaining appropriate number of bunches per vine and leaf area for development of individual bunch on a vine will help to maintain uniform colour. In the late pruned vineyard, application of ethephon for colour development should be avoided as grape bunches may loose its turgidity.

In case of reduced canopy, the covering of grape bunches by paper or covering the canopy by shade net can be the option. This will help for maintaining uniform colour.

During this stage, the vineyard may experience cluster necrosis problem. The disturbance of nutrient balance in the vine coupled with excess bunch load generally lead to cluster necrosis. After the veraision stage starts, the management practices will not be useful to control. Hence, depending upon earlier experience of the grape vineyard, the application of calcium and magnesium should be started and completed one week before berry softening stage.

2) Vineyard establishment:

The establishment of new vineyard requires attention. Before planting of rootstock, the plot size and row direction need to be considered. For easy movement of tractor in the vineyard and convenience of activities to be undertaken, the row length should be 250-300 feet. The row should be in N-S direction so that the cordon direction will also be in NS direction while the shoot orientation will, be in E-W direction. This will help to harvest uniform sunlight required for the process of photosynthesis and formation of food material required for bunch development. Planting of rootstock should be completed before the temperature starts rising.

IV. Disease management

Days after fruit pruning	**Risk of diseases**			
	Downy mildew	**Powdery mildew**	**Anthracnose**	**Others (specify)**
136	Low	Low	Very Low	Bacterial spot- Very low Rust- Nil

Powdery mildew infection is incident in some areas and an application of sulphur 80WDG @ 2-3g/l may be given during late evening hours. Use of *Ampelomyces quisqualis* needs to be increased for powdery mildew management. Application of Bacillus subtilis @2ml/L may also be done for powdery mildew control.

Bacterial spot

Anthracnose

Downy mildew

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V. Insect and Mite Pest Management

Growth Stage: Berry development stage to veraison after October pruning

- Mealybug, thrips and mites population may be noticed due to favourable weather conditions.
- Buprofezin 25 SC @ 1.25 ml per litre water (PHI 65 days) is effective against mealybugs. Entomogenous fungus such as *Metarhizium, Beauveria* and *Lecanicillium* can be used for plant wash to reduce mealybug populations. If PHI with above insecticides is not available, then spot plant wash with trisiloxane polyether surfactant @ 0.3 ml per litre water with 10-12 litre water per plant to remove mealybug and honeydew from plant and bunches in the field can be given followed by wash with water. High pressure of spray and not washing with water after use of surfactant may cause damage to berries. This practice to be done only to wash away mealybugs and stopping them to spread to healthy bunches. This should only be done as spot application and not in the entire vineyard.
- Remove excess shoot growth to manage thrips. If pesticide application is necessary, then abamectin given for the management of mites will also control thrips.

- Mite infestation may increase in most of the grape areas. Sulphur 80 WDG @ 1.5-2.0 g/L or Abamectin 1.9 EC @ 0.75 ml/L (PHI 30 days) or Bifenazate 22.6 SC @ 0.5 ml/L (PHI 30 days) water may be applied if mite infestation is observed.
- Some areas may see aphid infestation on bunches. Imidacloprid 17.8 SL @ 0.4 ml per litre (PHI 65 days) may be sprayed. Install yellow sticky traps for better management.