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

WEATHER DATA FOR THE PREVAILING WEEK

Thursday (18/12/2025) – Wednesday (24/12/2025)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min-Max	R H%
	Min	Max				
Nashik	13-14	26-27	Nashik, Ozar, Kalwan, Pimpalgaon Baswant, Dindori, Palkhed, Loni, Vani–Thu-Wed—No Rain.	Clear to cloudy	8-13	14-27
Pune	12-14	27-29	Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Patas, Yavat, Narayangaon, Baramati, Indapur–Thu-Wed—No Rain.	Clear to cloudy	9-11	18-25
Solapur	13-14	28-30	Solapur, Tuljapur, Ausa, Vairag, Barshi, Pandharpur, Nannaj, Latur– Thu-Wed—No Rain.	Clear to cloudy	15-22	18-24
Sangli	11-15	29-30	Sangli, Miraj, Walva, Palus, Kawtha, Palsi, Khanapur Vita, Shetphal, Shirguppi –Thu-Wed—No Rain.	Clear to cloudy	13-19	16-27
Vijayapura	10-12	25-27	Chadchan, Tikota, Telsang, Vijayapura–Thu-Wed—No Rain.	Clear to cloudy	12-16	29-37
Hyderabad	12-13	27-30	Hyderabad, Medchal, Zahirabad–Thu-Wed—No Rain.	Clear to cloudy	11-14	21-43
Satara	8-11	28-29	Satara, Khatav, Phaltan– Thu-Wed–No Rain.	Clear to cloudy	9-14	21-28
Ahmednagar	11-13	26-28	Sangamner, Rahata, Kopargaon, Akole, Ahmednagar, Shrigonda, Karjat, Jamkhed – Thu-Wed–No Rain.	Clear to cloudy	13-18	17-26
Jalna	10-13	25-27	Jalna, Ambad, Ghansavangi, Jafrabad, Mantha – Thu-Wed–No Rain.	Clear to cloudy	6-8	20-30
Buldhana	9-12	28-30	D.raja, Buldana, Chikhli, Sindkhed–Thu-Wed—No Rain.	Clear to cloudy	4-8	20-27
Kolhapur	11-14	26-28	Kagal, Karveer, Gagan-bavada –Thu-Wed—No Rain.	Clear to cloudy	6-11	21-30
Bengaluru	12-13	26-28	Anekal, Doddaballapur,	Clear to	11-18	22-30

Rural			Bengaluru -east, Bengaluru-north, Bengaluru — Thu-Wed–No Rain.	cloudy		
Belagavi	12-14	27-28	Belagavi, Gokak, Athni, Chikodi –Thu-Wed—No Rain.	Clear to cloudy	11-18	16-31
Bidar	11-14	25-26	Bidar, Humanabad, Basavakalyan –Thu–Wed–No Rain.	Clear to cloudy	11-13	21-34
Bagalkot	12-14	28-29	Bagalkot, Jamkhandi, Hungund, Mudhol–Thu-Wed—No Rain.	Clear to cloudy	17-24	17-29

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.

II. Water management

Pan evaporation: 3.5 to 5 mm

Amount of irrigation advised:

1. In case the soil is under wapsa (field capacity) condition, donot irrigate the vineyard.
2. From flowering to fruit setting, apply irrigation through drip upto 2000-2500 L/ acre/ day. Vigour needs to be controlled.
3. 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.
4. During Berry development stage, apply irrigation through drip @ 5950 - 8500 L/ acre/ day for all grape growing regions.

Soil and Nutrient management :

1. Inflorescence necrosis could be a issue in dense canopy. Remove side shoots and reduce canopy to allow penetration of the sunlight for proper aeration. Manage canopy for adequate sunlight and air movement within the canopy for avoiding/ minimizing problems of kooj (inflorescence necrosis).
2. Unnecessary sprays should be avoided as the leaf health is bound to affect the photosynthate formation. This will impact bunch development.
3. Donot apply any nitrogen based fertilizer just before Flowering to Setting stage to avoid problems of kooj (inflorescence necrosis).

4. 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.

Flowering to setting stage:

1. Donot apply any nitrogen based fertilizer just before Flowering to Setting stage to avoid problems of kooj (inflorescence necrosis).
2. Apply 3-4 kg Phosphoric acid in two to three splits this week. Remember that the pH of the irrigation water should be near 6.0. OR apply SSP @ 125kg/acre as basal application. SSP should be mixed with FYM/Compost before application to minimize phosphorus fixation.
3. If SOP not applied, then apply 15 kg SOP in case low temperature and cloudy conditions forecasted during flowering stage.
4. **Petiole nutrient testing: At 70% capfall stage, petiole samples should be taken for nutrient analysis. The leaf opposite the bunch should be removed for sampling.**

Berry Development stage:

1. After Berry setting, continue initially with Phosphoric acid application @ 2 kg followed by 5 kg 12-61-0/acre.
2. If the berry size is from 2-4mm, spray calcium @ 2g Calcium Chloride / Calcium Nitrate per litre. Target sprays immediately after GA application (preferably next day) for better absorption.
3. If the berry size is from 5-8mm, spray calcium @ 2g Calcium Chloride / Calcium Nitrate per litre. Target sprays immediately after GA application (preferably next day) for better absorption.
4. 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.
5. If soils are calcareous, then apply zinc sulphate and ferrous sulphate @ 5 kg/acre at 65-70 days after pruning.
6. 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. Spray Magnesium sulphate @ 4g/L in calcareous soil.

III. Canopy Management

Based on the present growth stages and weather condition in grape vineyard, following suggestions are offered.

1) Canopy management for reducing disease infection:

Current weather conditions are highly conducive to Downy mildew infection in vineyards. Severe incidence of Downy mildew has already been observed in early-pruned vineyards. To minimize disease spread and severity, adopt the following canopy and sanitation measures right from the early stages of shoot growth and bunch emergence:

- Remove all excess, non-fruitful shoots to improve aeration and light penetration.
- Strip 3–4 basal leaves (up to the first cluster) as soon as the disease starts spreading upward, especially if infection pressure is increasing.
- If Downy mildew symptoms (oil spots, white downy growth) appear on young leaves and developing bunches, immediately remove and destroy infected bunches along with the affected shoots/leaves.

2) Vineyard in pre- bloom stage:

To obtain the grape bunch meant for export purpose, it is necessary to achieve the elongated bunch having increased length of rachis as well as distance between two rachises. This can only be achieved during pre- bloom stage with the help of GA3. In the late pruned grape vineyards, at present pre-bloom stage might be available. At parrot green stage of a bunch, spray of GA3 @ 10 ppm (at about 18-19 days after fruit pruning) and another spray of GA3 @ 15 ppm (5-6 days after the first spray) will kelp to achieve elongated bunch during pre-bloom stage. To obtain good results for bunch elongation, only GA3 will not be helpful but the efficiency of GA3 spray solution will be more important. To increase the efficiency of GA3, water used for spray solution should have pH of about 6.5 to 7.0. The GA3 spray solution should have pH of about 5.5 to 6.0. To achieve this, citric acid @0.5 g/L or urea phosphate @ 1.0 g/L. For better GA3 use efficiency, spraying should be done when the relative humidity in grape vineyard is more than 60%. Considering this, spraying during evening time will be more beneficial. Before

GA3 spray, one spray of zinc and boron will be more beneficial that will help to increase GA3 efficiency.

3) The vineyard from pre- bloom stage to flowering stage:

The GA3 spray can be given only during clear weather for better results. Removal of 2 to 3 basal leaf will help for good aeration and coverage of fungicide. In case of white seedless varieties (Thompson Seedless and Tas-A-Ganesh) during full bloom stage, GA3 spray @ 25 ppm can help for berry thinning as it acts as pollinicide. The GA3 schedule for elongated varieties (Sonaka, Manik Chaman, Super Sonaka, Sarita Seedless, Krishna Seedless, SSN, etc) is different than the above. In these varieties, GA3 can be sprayed as below.

a) Pre-bloom stage: 10 ppm GA3

b) Pre-bloom stage: 15 ppm GA3

c) 25% flowering: 10 ppm GA3

d) 50% flowering: 10 ppm GA3

e) 60-80% flowering: 10 ppm GA3

f) 90-100% flowering: 60 ppm GA3

g) After berry set: 40-50 ppm GA3 + 10 ppm IAA

4) Berry setting to 8 mm berry size:

The vineyard where berry setting is completed, bunch thinning and berry thinning need to be considered important. The bunches should be retained based on objectives (raisin, local market, and export). The retention of berries per bunch should be based on the bunch type, variety, etc. Berry retention based on the variety is as below.

Variety	No of rachis/bunch		No of berries/bunch	
	Local	Export	Local	Export

Thompson Seedless	12-14	10-12	130-140	100-120
Tas-A-Ganesh	12-14	10-12	130-140	100-120
Sonaka	14-16	12-14	140-150	130-140
Manik Chaman	14-16	12-14	140-150	130-140
Sarita Seedless	14-16	12-14	140-150	130-140
Red Globe	10-12	8-10	80-90	70-75
Nanasaheb Purple Seedless	10-12	8-10	80-90	75-80
Crimson Seedless	10-12	10-12	120-130	100-120

4) Leaf requirement for bunch development:

The leaf requirement for bunch development should be given priority. For development of 500 g bunch (100-120 berries), one shoot should have at least total 12 leaf with leaf area of about 160-170^2 cm.

Approximately 6-8 berries are developed with the support of one leaf. The leaf requirement can be fulfilled upto berry setting. Hence, during the pre-bloom stage to complete the leaf requirement application of nitrogenous fertilizer (urea, 12:61:0, ammonium sulphate, etc) can be applied through drip. Depending upon the curve of shoot tip, the fertilizer requirement can be decided.

5) Effect of low temperature:

In some of the grape growing areas (Bori, Indapur, Satana, Phaltan, etc), early pruning is done. In many of the grape growing regions, minimum temperature is below 12^{0}C. In white seedless varieties, the grape bunches at nearing veraison stage suffers with change in green colour to pink colour. This is a physiological disorder. Pink pigmentation is observed when the minimum temperature starts dropping below 7^{0}C for one to two days. Though there is no control measure available to stop pink colour formation but some of the management practices can be followed to save the grape bunches. Covering the grape bunch with paper (before veraison starts), increase the irrigation in grape vineyard and burning file in different spots to increase the temperature can help to minimize the problem. After berry set (4-6 mm berry size) the berry develops at faster rate. However,

during the period of low temperature, physiological activities a view slow down thereby reducing the berry size. The root activity is also seen reduced. This needs to be accelerated by increasing soil temperature. Application of mulch on bund, small trench on the side of bund, increasing phosphorous dose, irrigation, etc. are some of the major practices that can be followed.

6) Effect of dew on berry development:

Since the current experienced sufficient rainfall with longer period in all the grape growing regions, in the coming months, the dew formation during morning hours will be more and the period may also be extended even upto afternoon. This will increase the relative humidity in the vine canopy. The increase in humidity will help to activate the inoculum of major disease like downy mildew. Dry weather in the canopy during evening time may lead to incidence of powdery mildew in case of vineyards after berry setting. More than the use of fungicide, canopy plays a crucial role in controlling the diseases in the grape vineyard. Removal of 2-3 basal leaf, removal of excess shoots, side shoots, arranging the shoots on foliage wire after berry set, etc will help to reduce the relative humidity in the canopy thereby improving the spray coverage for the control of diseases.

IV. Disease management

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

As temperature will gradually go down, incidence of powdery mildew may be seen and application of sulphur @2-2.5g/L may be done. If the disease is already visible, hexaconazole or difenoconazole may be sprayed. Fluxapyroxad+ Difenoconazole or Metrafenone or Polyoxin D Zinc salt or cyflufenamid will also control powdery mildew appreciably. Regular application of biocontrol agents may be continued. In regions where dew is prevalent, dusting of mancozeb may be done.

VII. Insect and Mite Pest Management

Growth Stage: berry development after fruit pruning

- Aphid infestation may be seen in many grape growing regions especially Sangali and Solapur. These aphids are black in colour and honeydew may be seen on bunches and shoots due to its feeding. Imidacloprid 17.8 SL @ 0.4 ml per litre of water is effective. But, these aphids will keep coming for the next month and repeated application of insecticides is not advisable. Install yellow sticky traps to manage them. Application of *Lecanicillium lecanii*, *Beauveria bassiana* and *Metarhizium anisopliae* is also effective against aphids. Plant cowpea plants as trap crop near the vineyards and reapeatedly control aphids on them.

- Caterpillar and thrips infestation may be noticed in some of the grape areas. In case of infestation, application of emamectin benzoate 5 SG @ 0.22 g per litre or cyantraniliprole 10 OD @ 0.7 ml per litre water is effective.
- For flea beetle management, imidacloprid 17.8 SL @ 0.4 ml/L or spinosad 45 SC @ 0.25 ml per liter water at night is effective.
- Vineyards may have moderate mealybug infestation as well. Do not spray any broad spectrum insecticides such as chlorpyrifos, dichlorvos, methomyl, profenophos, etc. for mealybug control. Higher humidity will favour development of natural enemies which will slowly kill mealybugs. In case chemical spray is required, prefer spot application of buprofezin 25 SC @ 1.25 + *Metarhizium anisopliae* 3 ml per litre of water for plant wash.
- All the cracked/damaged berries should be removed from the grape bunches and vineyards. Collect these berries in a container and place this container about 100 feet away from the

vineyards. The vinegar flies will get attracted towards these rotting berries. Spray spinosad 45 SC @ 0.25 ml per litre water over the container to kill them.

- Incidences of new species of stem borer (red colour larva) may be noticed under bark in Sangali, Solapur, Nashik, Pune, Bijapur grape areas. Remove the loose bark and give good plant wash mainly targeting cordons and main trunk *Metarhizium anisopliae* @ 2.5 ml/l (water volume 1.5 litres per plant).
- Remove the excess shoot growth to manage thrips population during berry development stages.