

**WEATHER DATA FOR THE PREVAILING WEEK**  
**Date of Fruit Pruning: 15/09/2021**  
**Thursday (27/01/2022)–Wednesday (02/02/2022)**

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min-Max	R H%	
	Min	Max				Min	Max
<b>Nashik</b>	11-15	26-31	Nashik, Dindori, Ozar, Vani, Palkhed, Kalwan, Pimpalgaon Baswant, Loni – Thu to Wed- No rain	Clear to partly cloudy	06-14	12-23	24-36
<b>Pune</b>	12-15	27-30	Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Patas, Yavat, Narayangaon, Baramati, Indapur- Thu to Wed –No Rain	Clear to partly cloudy	06-12	12-22	21-29
<b>Solapur</b>	12-14	28-30	Vairag, Barshi, Nannaj, Ausa, Pandharpur Latur, Tuljapur, Solapur – Thu to Wed –No rain,	Clear to partly cloudy	09-16	11-21	19-30
<b>Sangli</b>	16-18	29-32	Sangli, Shetfal, Arag, Kagvad Palus, Vita, Walva, Kawthe, Palsi Khanapur, Miraj, Tasgaon, Shirguppi- Thu to Wed –No Rain.	Clear to partly cloudy	12-19	11-24	22-40
<b>Vijayapura</b>	12-15	28-30	Vijayapura, Chadchan, Tikota & Telsang Thu to Wed –No Rain.	Clear to partly cloudy	12-18	12-25	23-32
<b>Hyderabad</b>	13-16	27-30	Hyderabad, Medchal, Zahirabad – Thu- Wed- No Rain	Clear to partly cloudy	04-13	12-24	22-37
<b>Satara</b>	13-16	27-30	Satara, Khatav, Phaltan Thu to Wed - No Rain.	Clear to partly cloudy	07-11	15-25	24-46
<b>Ahmednagar</b>	11-13	26-29	Ahmednagar, Karjat, Shrigonda, Jamkhed, Kopargaon, Rahata, Sangamner, Akole - Thu to Wed- No Rain,	Clear to partly cloudy	06-15	10-20	21-23
<b>Jalna</b>	10-12	24-28	Ambad, Jalna, Jafrabad, Gansawangi, Mantha – Thu to Wed- No Rain	Clear to partly cloudy	05-13	11-19	24-26
<b>Buldhana</b>	09-14	24-28	Buldana, Chikhli, Sindkhedraja, D.raja- Thu to Wed- No Rain	Clear to partly	05-10	12-19	24-40

				cloudy			
<b>Kolhapur</b>	17-21	30-33	Kagal, Karveer, Gagan-bavada - Thu to Wed-No Rain.	Clear	08-15	15-28	27-88
<b>Bengaluru Rural</b>	14-17	27-30	Bengaluru-east, Bengaluru-north, Bengaluru-south ,Doddaballapur, Anekal – Thu, Fri- Drizzling to Light Rain.	Clear to partly cloudy	11-18	33-47	84-90
<b>Belagavi</b>	16-18	28-29	Belagavi,Gokak,Chikodi, Khanapur, Athni -Thu-Wed-No rain	Clear to partly cloudy	11-16	17-36	37-85
<b>Bidar</b>	11-15	26-28	Bidar, Humnabad, Basavakalyan -Thu to Wed- No Rain	Clear to partly cloudy	07-13	12-25	23-42
<b>Bagalkot</b>	13-16	28-29	Bagalkot, Mudhol, Jamkhandi, Hungund- Thu to Wed -No rain	Clear to partly cloudy	12-20	14-29	27-56

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

[https://www.wunderground.com/?cm\\_ven=cgi](https://www.wunderground.com/?cm_ven=cgi)

<https://imdagrmet.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 (Dr. A.K. Upadhyay & Yukti Verma)**

**A) Days after pruning** – 133 days

**B) Pan evaporation:** 4-6 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 stage, apply irrigation through drip @ 6,800- 10,200L/ acre/ day. Further, in case vigour is more than desired, then reduce irrigation water application by half to 3,400 – 5,100 L/ acre. Still if you are not able to control the vigour, stop irrigation till such time growth is controlled.
4. Flooding should be avoided.

**Soil and Nutrient management:**

**Note:** In early maturing and coloured varieties incidence of cracking are being observed. If the harvesting is scheduled with in 30 days, do not go in for application of boron and calcium application. This will be waste of money and time. 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).

Due to major variation in minimum and maximum temperature, pink berry issues are observed. The only solution is paper covering of the bunches.

**Berry Development stage:**

1. Apply magnesium sulphate through drip @ 10kg/acre from 8-10mm berry size.
2. Foliar spray of sulphate of potash @ 3g/acre at 8-10mm berry size.
3. After 8-10 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.

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.
6. Manage canopy for adequate sunlight and air movement within the canopy for avoiding/minimizing problems of berry cracking.

**Ripening to Harvest stage:**

1. Apply Sulphate of potash or 0-0-50 @ 25 kg/ acre in 3-4 splits for next two weeks. Total potassium application (SOP) should be approx. 60 kg/acre during this stage. Follow this up with Magnesium sulphate @ 10 kg/acre in two splits.
2. Spray Magnesium sulphate and potassium sulphate @ 3g/L in calcareous soil.
3. Manage canopy for adequate sunlight and air movement within the canopy for avoiding/minimizing problems of berry cracking.

**III. Requirement of growth regulators (Dr. S.D. Ramteke)**

- NIL

#### **IV. Canopy management (Dr. R.G. Somkuwar)**

During the coming week, following practices need to be followed.

The temperature is likely to increase with reduction in relative humidity. The growers are advised to initiate the re-cut in their vineyard grafted during last season. The following suggestions are offered.

1. In many of the grape vineyards, cluster drying is being observed. This might be due to either downy mildew infection, excess bunch load or imbalance of nutrients in the vine. Under such conditions, spraying of recommended fungicides and application of nutrients may be followed.
2. In some of the grape vineyards, the knot on a bunch is observed. This is mainly due to excess use of PGR during the berry development stage. Growers are advised to use the PGR judiciously. Under such conditions, nitrogenous fertilizer to small doses may help to control further development of a knot.
3. As the temperature is increasing, the incidence of mealy bug in the vineyards is increasing. The incidence is more after the veraison stage. Hence, proper care to be taken using biological control.
4. Since the minimum temperature is increasing, the re-cut of vines grafted during last season is to be planned.
5. Open a trench of 2 to 3 inch depth between the two vines, apply FYM and fertilizer and cover with the soil.
6. Before re-cut, the irrigation should be withdrawn for about 6-7 days (depending upon soil type). This will help to sprout for bud swelling.
7. Application of hydrogen cyanamide should be based on shoot diameter and temperature available in the vineyard during the time of re-cut.

## V. Disease management (Dr. Sujoy Saha)

Days after fruit pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
133	Nil	Moderate	Nil	Bacterial spot-Nil Bunch rot-Moderate

Foliar spray of *Trichoderma* to be given @2-3ml/L but it should not be given immediately after application of chemical fungicides. *Trichoderma* through drip should be continued. Sprays of *Ampelomyces quisqualis* @5g/l may also be given when high humidity with low temperature is prevailing, for the control of powdery mildew. Preventive spray of sulphur @ 2-3g/l will also give a protection against powdery mildew at this stage. If the incidence of powdery mildew is high, application of Cyflufenamid@ 500ml/ha or tetraconazole @ 0.75 ml /L or Fluxapyroxad+Difenoconazole@ 800ml/ha or metrafenone @250ml/Ha may be sprayed in non-export crops for the control of powdery mildew. Target application of *Bacillus* sp or *Trichoderma* with hand sprayer may be done to get good results. Chitosan may also be applied to prevent berry cracking as well as control of powdery mildew.

## VI. Insect and Mite management. (Dr. D.S. Yadav)

### Growth Stage: Berry development stage to veraison after October pruning

1. Mealybug, thrips, mites and caterpillar population may be noticed due to favourable weather conditions.
2. Buprofezin 25 SC @ 1.25 ml per litre water (PHI 65 days) or spirotetramat 15.31 OD @ 280 ml per acre (PHI 60 days) are effective against mealybugs. Soil drenching with clothianidin 50 WDG (PHI 60 days) may also be given for mealybug management. 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.
3. Remove excess shoot growth to manage thrips. If pesticide application is necessary, then abamectin given for the management of mites will also control thrips.
4. Emamectin benzoate 5 SG @ 88 gram per acre or cyantraniliprole 10 OD @ 0.7 ml per litre water is effective against *Spodoptera* caterpillars and thrips.
5. Bunch webbing caterpillars may start damaging bunches in most of the grape areas where humidity is high. The most effective way to control them is to collect and kill them by hand as insecticides may not reach inside the bunch. The caterpillars on leaves are also needs to be killed as they can go inside the bunch later on. Spraying of emamectin benzoate 5 SG @ 0.22 gram per litre water or cyantraniliprole 10 OD @ 0.7 ml per litre is effective to manage them.
6. 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.
7. Some areas may see aphid infestation on bunches. Imidacloprid 17.8 SL @ 0.4 ml per litre (PHI 60 days) may be sprayed.
8. All the cracked/damaged berries should be removed from the grape bunches. These berries should be destroyed by burying them minimum two feet deep in the ground away from the vineyards. It will reduce the scavenging fly population in the vineyard. Ripe banana can act as a good attractant

for these scavenging flies. Therefore, banana traps can be made and installed at the rate 5 per acre. To make a banana trap, take a container with small holes at sides and put a fully ripe banana inside it cut into pieces. Pour 2-3 drops of spinosad 45 SC on the banana. Cover the mouth of the container with inverted paper-cone keeping a small hole at the bottom for fruit flies to enter. The berry cracking of grapes should be managed by following suitable viticultural practices.