

WEATHER DATA FOR THE PREVAILING WEEK

Date of Fruit Pruning: 28/09/2020

Wednesday (06/01/2021)–Wednesday (13/01/2021)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min-Max	R H%	
	Min	Max				Min	Max
Nashik	18-20	27-33	Nashik, Ozar, Palkhed, Dindori, Devla, Vani, Loni, Kalwan Wed, Thu & Mon - Drizzling. Fri- Moderate Rain. Sat- Good Rain. Sun- Light Rain. Pimpalgaon Baswant Fri & Sat- Light Rain. Niphad Fri & Sat- Good Rain. Sun- Moderate Rain. Shirdi Wed, Thu & Mon - Drizzling. Fri- Good Rain.	Partly Cloudy	2-16	38-54	58-76
Pune	18-22	31-34	Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Narayangaon, Supa, Junnar, Yavat, Patas, Baramati Wed & Thu- Light Rain. Fri to Sun- Good Rain. Mon- Drizzling.	Partly Cloudy	0-14	46-56	70-82
Solapur	19-21	27-31	Solapur, Vairag, Nannaj, Kati, Pangri, Osmanabad, Pandharpur, Barshi, Kasegaon, Atpadi, Latur, Ausa Thu & Fri- Good Rain. Sat- Light Rain. Tuljapur Thu & Fri- Moderate Rain. Sat & Sun- Light Rain.	Partly Cloudy	5-15	28-54	69-86
Sangli	17-20	25-30	Sangli, Miraj, Kagvad, Palus, Tasgaon, Shetfal, Khanapur, Shirguppi, Vita, Arag, Walva Wed & Mon- Light Rain. Thu to Sat- Good Rain. Sun- Moderate Rain. Palsi Fri- Light Rain. Kawthe Mahakal Wed & Sun - Moderate Rain. Thu to Sat- Good Rain. Mon- Drizzling.	Partly Cloudy	3-17	43-56	77-87
Vijayapura	17-20	25-27	Vijayapura, Tikota, Telsang, Chadchan Wed, Thu, Sat & Tue- Moderate Rain. Fri- Good Rain. Sun- Light Rain. Mon- Drizzling.	Partly Cloudy	5-18	33-53	76-86
Hyderabad	16-19	24-28	Hyderabad, Medchal Thu & Fri- Light Rain. Sat- Drizzling. Zahirabad Wed & Thu - Drizzling. Sat- Light Rain.	Partly Cloudy	2-13	34-48	76-93

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

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

<https://imdagrmet.gov.in/weatherdata/BlockWindow.php>

<https://www.accuweather.com/>

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

II. Water management (Dr. A.K. Upadhyay)

a) Days after fruit pruning: 100

b) Pan evaporation: 3-5 mm

Amount of irrigation advised

1. In case the soil is under wapsa (field capacity) condition, donot irrigate the vineyard. Especially during rain forecast, the soil should be maintained at wapsa condition to avoid uptake of water to the bunch.
2. During Flowering to setting stage, apply irrigation through drip @ 2,000 to 2,500L/ acre/ day.
3. During Berry development stage, apply irrigation through drip @ @ 5,100- 8,500L/ acre/ day. Further, in case vigour is more than desired, then reduce irrigation water application by half to 2,500 – 4,200 L/ acre. Still if you are not able to control the vigour, stop irrigation till such time growth is controlled.
4. 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.
5. Flooding should be avoided.

Soil and Nutrient management

Flowering to setting stage:

1. Manage canopy for adequate sunlight and air movement within the canopy for avoiding/ minimizing 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.
3. 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. If the berry size is from 2-4mm, spray calcium @ 2g Calcium Chloride or 0.5 g Ca chelate per litre. Target sprays immediately after GA application (preferably next day) for better absorption.
2. If the berry size is from 5-8mm, spray calcium & 2g Calcium Chloride or 0.5 g Ca chelate per litre. Target sprays immediately after GA application (preferably next day) for better absorption.
3. In the calcareous soil, spray magnesium sulphate @ 3g/L on the vines followed by fertigation of magnesium sulphate @ 10kg/acre from setting till 6-8 mm berry stage.
4. Foliar spray of sulphate of potash @ 3g/acre at 8-10mm berry size.
5. 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.

6. If soil is calcareous, then apply zinc sulphate and ferrous sulphate @ 5 kg/acre at 65-70 days after pruning.
7. 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. Follow this up with Magnesium sulphate @ 10 kg/acre in two splits. Spray Magnesium sulphate in calcareous soil.
2. 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)

At present the major grape growing areas are experiencing either cloudy condition or rainfall. This will create the problem of berry development. The practices/measures are suggested for the following.

Root activity

- 1) The stamping on bund while doing many activities like berry thinning, bunch dipping and training the shoots on wire has reduced the activity of roots. Hence, the loosening of bund should be done.

- 2) Making a small trench on the side of a trench using tractor or loosening the soil on the bund just near the place where the water falls will help for activation of new roots called as white roots.
- 3) Mulching to be done on priority as the root activity will be better by increasing the temperature in root zone.
- 4) The increase in temperature in near future will also help in reducing the water requirement.

Yellowing of leaf:

- 1) Dense canopy on the vine after berry set will be reducing the sunlight.
- 2) Removal of 3-4 leaf below the bunch will support aeration in the canopy.
- 3) The side shoots on a bunch bearing shoot should be removed on priority. This will support individual leaf for photosynthesis.
- 4) In the dense canopy, the lower side leaf will become yellow. Such leaf will not prepare their food on their own but will depend on other leaf. Hence, removal of excess canopy should be priority.

V. Disease management (Dr. Sujoy Saha)

Days after fruit pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
100	Low	Moderate	Nil	Nil

As most of the grape growing areas have received untimely rainfall, there is a chance of accumulation of water in the berries if the crop is beyond 80-90 days. This might lead to bunch rot or a residual downy mildew infection leading to heavy losses. Horticulture grade mineral oil@ 2 ml/L may

be sprayed to drain off the water followed by dusting of Mancozeb 75WP @ 3-5 kg/acre. If downy mildew persists, application of potassium salt of phosphoric acid @4g/L may be done. Spray application of Trichoderma sp. @ 2-3g/L specifically directed towards the bunches could prevent bunch rot. As most of the vines are in berry setting stage sulphur 80WDG @ 2g/L for managing powdery mildew should be applied. Application of Ampelomyces quisqualis @ 6-8g/L should be done now as the conditions are suitable for its multiplication and establishment. One application of chitosan @ 2ml/L may also be given to prevent berry cracking and powdery mildew infection in crops which are around 100 days. Use of chemical fungicides are to be minimized and more emphasis should be on bio-intensive disease management at this stage.

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

Growth Stage: Berry setting to development stage after October pruning

- Buprofezin 25 SC @ 1.25 ml/L (PHI 65 days) water or spirotetramat 15.31 OD @ 700 ml/hectare (PHI 60 days) may be used for the management of mealybugs. In case PHI cannot be maintained for application of insecticides, tag mealybug infested vines and wash with any trisiloxane polyether based surfactant @ 0.3 ml per litre water with water volume 10-12 litres per vine with single gun at high pressure to wash off the mealybugs.
- 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.