

WEATHER DATA FOR THE PREVAILING WEEK

Date of Fruit Pruning: 28/09/2020

Wednesday (30/12/2020)–Wednesday (06/01/2021)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min-Max	R H%	
	Min	Max				Min	Max
Nashik	14-18	29-30	Nashik, Pimpalgaon Baswant, Ozar, Palkhed, Dindori, Devla, Niphad, Vani, Loni, Shirdi, Kalwan - No Rain.	Partly Cloudy	0-19	29-37	53-66
Pune	16-20	30-31	Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Narayangaon, Supa, Junnar, Yavat, Patas, Baramati -No Rain.	Partly Cloudy	0-19	26-38	38-56
Solapur	15-18	28-31	Solapur, Vairag, Nannaj, Kati, Pangri, Osmanabad, Pandharpur, Tuljapur, Barshi, Kasegaon, Atpadi, Latur, Ausa -No Rain.	Partly Cloudy	6-19	22-30	50-77
Sangli	15-19	27-31	Sangli, Miraj, Kagvad, Palus, Tasgaon, Shetfal, Khanapur, Palsi, Shirguppi, Vita, Kawthe Mahakal, Arag, Walva -No Rain.	Partly Cloudy	4-20	17-32	55-72
Bijapur	15-18	28-30	Bijapur, Tikota, Telsang, Chadchan -No Rain.	Partly Cloudy	8-23	26-28	58-65
Hyderabad	13-16	26-30	Hyderabad, Medchal, Zahirabad -No Rain.	Partly Cloudy	3-16	27-44	83-96

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:** 93days
- b) Pan evaporation:** Pan evaporation: 3.5-4 mm

Amount of irrigation advised:

1. In case the soil is under wapsa (field capacity) condition, donot irrigate the vineyard.
2. During Flowering to setting stage, apply irrigation through drip @ 2,500 to 3,400L/ acre/ day.
3. During Berry development stage, apply irrigation through drip @ @ 5,950- 6,800L/ acre/ day. Further, in case vigour is more than desired, then reduce irrigation water application by half to 2,500 – 3,400 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.

IV. 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.

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.

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

Nil.

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

1) Reduction in temperature and berry development:

At present the minimum temperature in the major grape growing area is below 10 °C. This may result into reduction in physiological activities. To avoid, following practices are suggested.

- a) Use of mulching on the bund. This will help to increase the temperature in root zone.
- b) Loosening of soil in the root zone. This will also support to increase temperature in root zone.
- c) Increase in irrigation will also help to increase the temperature of the vineyard.
- d) Under the condition of low temperature, fire in different spots will also help in increasing the temperature.
- e) Under this condition, the vineyard just before veraison stage may suffer with the formation of pink berries. Hence, bunch covering should be given priority. However, before covering the bunches, measures to control mealy bug and powdery mildew may be taken.

2) Source: sink in relation to bunch development:

For bunch development, leaf plays an important role. For a bunch with 450 to 500g weight, the shoot with 8 to 10 mm diameter requires 16 to 17 leaf. The bunch appears at 5th leaf position, hence there should be 10-12 leaf above the bunch. For proper development of a bunch all the available leaf should be physiologically active. Hence open canopy should be preferred.

In late pruned vineyards (Kasegaon taluka of Solapur district), following practices are advised.

- a) Application of cytokinin based PGR at the time of bud sprouting (ponga stage). This may be continued till 2 – 3 leaf stage. This will help to control fillage. However, this need to follow till bunch emergence only.
- b) Excess shoots should be removed on priority. This will support for proper aeration in the canopy and help in improving the photosynthetic activity of the vine.
- c) While spray of GA3 during parrot green colour stage of a bunch, care to be taken that the pH of spray solution is maintained. This will help to improve efficiency of PGR.

V. Disease management (Dr. Sujoy Saha)

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

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. Drip application of *Trichoderma* may be given in areas where there is slight drizzle which will enable it to multiply. In late pruned crop, if there is an incidence of dew preventive application of Mancozeb @2g/L for downy mildew may be continued. If downy mildew persists, application of potassium salt of phosphoric acid @4g/L +mancozeb @2g/L may be done.

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

Growth Stage: Berry setting to development stage after October pruning

- Bunch-weber may be seen infesting bunches at some places. It is a minor pest so far. The most effective way to control them is to collect and kill them by hand as insecticides may not come into contact with it. 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 (pre harvest interval 25 days) at night or cyantraniliprole 10 OD @ 0.7 ml per litre (PHI 60 days) water is effective to manage them.
- 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.