

WEATHER DATA FOR THE PREVAILING WEEK

Date of Fruit Pruning: 15/09/2021

Thursday (25/11/2021)–Wednesday (04/12/2021)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min- Max	R H%	
	Min	Max				Min	Max
Nashik	17-20	30-32	Nashik, Dindori, Ozar, Vani, Loni, Pimpalgaon Baswant Shirdi, Kalwan, Palkhed Wed –Light Rain.	Clear to Partly Cloudy	06-14	29-42	51-64
Pune	16-20	29-30	Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Patas, Yavat, Narayangaon, Baramati, Supa Wed –Moderate Rain	Clear to Partly Cloudy	06-13	29-53	56-77
Solapur	18-20	30-31	Vairag, Kati, Osmanabad, Barshi- Wed- Good Rain. Latur Tue- Light Rain, Wed –Good Rain. AUSA, Kasegaon Wed- Good Rain. Pangri, Tuljapur, Pandharpur, Nannaj- Wed- Good Rain. Solapur- Thu, Mon- Light Rain, Wed- Good Rain.	Clear to Partly Cloudy	11-17	31-50	62-79
Sangli	18-21	30-32	Sangli- Thu- Light Rain, Wed- Good Rain. Shetfal, Palus, Vita, Arag, Walva, Kawthe, Palsi Khanapur, Miraj, Kagvad- Wed- Light Rain. Tasgaon, Shirguppi Tue- Light Rain, Wed- Good Rain.	Clear to Partly Cloudy	11-17	36-55	66-85
Vijayapura	18-20	30-31	Vijayapura, Chadchan, Tikota & Telsang Thu, Fri- Drizzling, Mon- Light Rain, Wed- Good Rain.	Partly to Mostly cloudy	13-19	33-56	65-87
Hyderabad	20-21	30-31	Hyderabad Thu- Drizzling, Tue- Good Rain, Wed- Moderate Rain. Medchal- Tue- Good Rain, Wed- Moderate Rain. Zahirabad Tue, Wed –Good Rain.	Clear to Partly Cloudy	08-13	28-41	55-88
Satara	16-20	27-31	Satara, Man, Khatav Rahata- Thu- Drizzling, Wed- Light Rain. Phaltan Wed- Moderate Rain.	Clear to Partly Cloudy	07-12	38-58	59-85
Ahmednagar	16-20	29-32	Ahmednagar, Nagar, Kopargaon, Shrigonda, Sangamner, Karjat Wed- Light Rain. Jamkhed, Akole, Rahata- Tue, Wed- Moderate Rain.	Clear to Partly Cloudy	08-16	29-53	51-76

Jalna	17-19	29-31	Jalna,Ambad,Gansawangi,Mantha Wed-Moderate Rain. Jafrabad Tue-Moderate Rain,Wed-Good Rain.	Clear to Partly Cloudy	06-13	27-43	50-70
Buldhana	18-20	30-32	Buldana,Chikhli, D.raja,Sindkhedraja Wed-Moderate Rain.	Clear to Partly Cloudy	07-12	28-42	48-69
Kolhapur	17-21	30-32	Gagan-bavada ,Kagal, Karveer Thu-Light Rain,Wed-Good Rain.	Clear to Partly Cloudy	07-13	41-57	63-89
Bengaluru Rural	18	20-27	Bengaluru-east, Bengaluru-north, Bengaluru-south ,Doddaballapur, Anekal – Fri,Sat- Light Rain, Sun to Wed – Good Rain.	Partly to Mostly cloudy	13-18	58-88	89-95
Belagavi	18-21	27-30	Belagavi,Gokak Thu-Light Rain, Wed-Good Rain. thni,Chikodi,KhanapurTue-Light Rain,Wed-Good Rain.	Clear to Partly Cloudy	10-17	46-65	71-92
Bidar	18-19	30-32	Bidar Humnabad ,Basavakalyan Mon-Moderate Rain,Tue,Wed- Good Rain.	Partly to Mostly cloudy	08-13	35-49	63-77
Bagalkot	18-20	28-30	Bagalkot,Hungund,Mudhol, Jamkhandi-Badami Thu,Fri-Light Rain,Mon-Moderate Rain, Wed –Good Rain.	Partly to Mostly cloudy	13-22	32-55	70-86

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 (Dr. A.K. Upadhyay and Dr. Yukti Verma)

- **Days after fruit pruning: 70**
- **Expected pan evaporation: 4-5 mm**
- a. Always check the weather App before irrigation water application. In case the rains are forecasted in next 2-3 days, donot irrigate until and unless salinity and sodicity issues are there and the vines show moisture stress symptoms.
- b. In case the soil is under wapsa (field capacity) condition, donot irrigate the vineyard.
- c. During shoot growth stage (fruit pruning season), apply irrigation through drip @ 6800- 8400 L/ acre/ day. Further, in case vigour is more than desired, then reduce irrigation water application to 3000 - 4500 L/ acre.
- d. 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.
- e. During Flowering to setting stage, apply irrigation through drip @ 2500 to 3500L/ acre/ day. Further, in case vigour is more than desired, then reduce irrigation water application by half.
- f. During Berry development stage, apply irrigation through drip @ 6800- 8400 L/ acre/ day.

Nutrient management

1. Due to continuous sprays the leaf will not look healthy, need based sprays should be followed as the leaf health is bound to affect the photosynthate formation. This will impact bunch development.
2. If possibility of rains in coming 2-4 days, spray SOP@ 2-4g/L depending upon stage and canopy size. Apply 15 kg SOP/acre through drip in two split application.
3. Manage canopy for adequate sunlight and air movement within the canopy for avoiding/ minimizing problems of kooj (inflorescence necrosis).

Shoot Growth stage

1. The quantity of nutrients to be applied through foliar, depends upon canopy size.
2. If the crop is between 5 leaf to prebloom stage, apply Zinc sulphate and Ferrous sulphate @ 15 kg/ acre based upon soil test value. Boron application should be carried out only if soil test value indicates low levels and the irrigation water does not contain boron. If during foundation puning,

the petiole test stated that boron was deficient then apply boron @ 1.5 kg to 5 kg depending upon the soil test value. Apply one kg boron at a time.

3. Apply 15 kg Magnesium sulphate per acre in two splits.
4. If soils are calcareous, spray Sulphate of potash and Magnesium sulphate @ 2-3g/L depending upon leaf age during prebloom stage.

Flowering to setting stage:

1. Do not 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 or 0.5 g Ca chelate 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 or 0.5 g Ca chelate per litre. Target sprays immediately after GA application (preferably next day) for better absorption.
4. 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.

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

Nil

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

Due to cloudy weather, the grape vineyard are experiencing the drop and inflorescence rot problem. Following possible management practices are suggested that may help to control.

1. Due to high R.H. and rainfall, shoot vigor will start increasing. Hence, pinching of shoot to be given priority.
2. In case of high vigor, nitrate level in the vine may also be increased. Hence, application of potash through spray and soil will help to control the vigor.
3. Open canopy will be the top priority in cloudy condition. Hence, removal of side shoots and basal 2-3 leaf will make open canopy. Under such canopy, aeration will be sufficient thereby reducing the chances of downy mildew incidence.
4. In majority of the grape vineyards, flower drop is experienced. This is mainly due to dense canopy creating the atmosphere of suffocation. Shoot pinching should help to control the drop. In severe cases, either girdling or making a small wound on cordon or trunk may also be helpful for controlling this problem.

V. Disease management (Dr. Sujoy Saha)

Days after fruit pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
70	High	Moderate	Low to moderate	Bacterial spot-Low Bunch rot-Moderate

As there is cloudy weather prevailing in most of the areas, application of Dimethomorph@1g/L+mancozeb 75WP@2g/L or Iprovalicarb+propineb @ 2.25g/L or Mandipropamid@ 0.8g/L may be done for downy mildew control. Two applications of Amisulbrom 17.7% SC @375ml/ha at 10-days interval will give a good control of downy mildew. In areas where dew is seen dusting of mancozeb/metiram @ 5kg/acre will give good control. Foliar spray of Trichoderma may also be given @2-3ml/L but it should not be given immediately after application of chemical fungicides. Trichoderma through drip should be continued. One spray of *Ampelomyces quisqualis* @5g/l may also be given when high humidity 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 Difenconazole @0.5ml/L or tetraconazole @ 0.75 ml /L or hexaconazole @ 1ml/L along with potassium hydrogen carbonate or mono potassium phosphate should be done. In Sangli area, due to untimely rains, bunch rot is being observed. Water droplets should not accumulate in the bunches and spray of horticulture grade mineral oil @2ml/L should be done to drain off the excess water. Target application of Bacillus sp or Trichoderma with hand sprayer may be done to get good results. Tank-mix of any chemicals should be strictly avoided.

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

Growth Stage: flowering, berry setting to berry development after fruit pruning

- In case of caterpillar and thrips 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 buprofezin 25 SC @ 1.25 + *Metarhizium anisopliae* 3 ml per litre of water for plant wash.
- 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 with broad spectrum insecticides, for example, lambda cyhalothrin 5 CS @ 2.5 ml/l.

