WEATHER DATA FOR THE PREVAILING WEEK

Date of Foundation Pruning: 15/04/2021

Wednesday (19/05/2021)–Wednesday (26/05/2021)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min-Max	R H%	
	Min	Max				Min	Max
Nashik	21-23	31-36	**Nashik, Dindori, Ozar, Palkhed, , Vani, Loni, Pimpalgaon Baswant, Niphad, Shirdi, Devla, Kalwan** Thu, Mon & Tue- Light Rain.	Clear to Partly Cloudy	4-13	27-55	81-90
Pune	19-21	26-33	**Pune, Phursungi, Loni Kalbhor, Uruli Kanchan,Patas, Yavat, Supa, Narayangaon, Junnar** Fri, Sun & Mon- Light Rain. Sat & Tue- Moderate Rain. **Baramati** Thu- Drizzling.	Clear to Partly Cloudy	3-12	29-55	76-83
Solapur	22-24	34-40	**Solapur, Vairag, Nannaj, Kati, Pangri, Osmanabad, Kasegaon, Atpadi, Latur, Ausa, Tuljapur, Barshi, Pandharpur** Thu- Moderate Rain. Mon- Light Rain. Tue- Good Rain.	Clear to Partly Cloudy	5-14	17-42	49-62
Sangli	20-22	31-36	**Sangli,Kagvad, Shetfal, Palsi, Palus, Khanapur, Vita, Tasgaon, Shirguppi, Arag, Miraj, Walva, Kawthe Mahakal** Thu- Good Rain. Fri to Mon- Light Rain.	Clear to Partly Cloudy	2-13	26-57	73-81
Vijayapura	22-24	33-37	**Vijayapura, Chadchan**, **Tikota, Telsang** Thu- Good Rain. Tue- Moderate Rain.	Clear to Partly Cloudy	5-14	26-47	62-74
Hyderabad	25-27	35-42	**Hyderabad, Medchal, Zahirabad** Thu- Moderate Rain. Mon- Light Rain.	Clear to Partly Cloudy	3-13	17-37	38-61
Satara	19-22	26-33	**Satara** Fri- Light Rain. Sat to Mon & Tue- Good Rain. **Man, Khatav** Thu & Tue- Good Rain. Sun- Drizzling. **Phaltan** Thu- Light Rain. Sat & Tue- Drizzling.	Clear to Partly Cloudy	2-11	32-57	74-87
Ahmednagar	21-24	31-39	**Ahmednagar, Nagar, Sangamner, Shrigonda, Karjat, Akole, Kopargaon, Rahata** Mon- Drizzling. Tue- Moderate Rain. **Jamkhed** Thu- Moderate Rain. Tue- Light Rain.	Clear to Partly Cloudy	4-13	20-42	52-70
Jalna	22-26	34-39	**Jalna, Ambad, Jafrabad, Mantha, Gansawangi** Thu & Sun- Light Rain. Tue- Moderate Rain.	Clear to Partly Cloudy	4-13	17-42	31-61

Buldhana	23-25	36-40	**Buldana, Chikhli, D.raja, Sindkhedraja** Thu, Sun & Tue- Light Rain.	Clear to Partly Cloudy	4-15	17-38	43-60
Kolhapur	22-24	27-32	**Gagan-bavada, Kagal, Karveer** Thu, Fri & Tue- Moderate Rain. Sat to Mon- Good Rain.	Clear to Partly Cloudy	3-12	55-68	88-96
Bengaluru Rural	20-21	31-33	**Bangaluru-east, Bangaluru-north, Bangaluru-south, Doddaballapur, Anekal** Thu & Sat to Mon- Good Rain. Fri & Tue- Light Rain.	Clear to Partly Cloudy	6-14	39-50	81-85
Belagavi	21-23	28-33	**Belagavi,Chikodi, Gokak, Khanapur** Thu- Light Rain. Fri to Sun & Tue- Good Rain. Mon- Moderate Rain. **Athni** Thu- Good Rain. Sat- Light Rain.	Clear to Partly Cloudy	4-12	48-61	85-95
Bidar	22-26	36-40	**Bidar, Basavakalyan, Humnabad** Thu & Tue- Good Rain. Sat- Light Rain.	Clear to Partly Cloudy	2-12	17-34	33-63
Bagalkot	21-23	33-34	**Bagalkot, Bilagi, , Jamkhandi, Mudhol** Thu- Good Rain. Sat- Drizzling. Mon & Tue- Moderate Rain. **Hungund, Badami** Thu, Sun & Mon- Good Rain. Fri- Drizzling. Sat & Tue- Moderate Rain.	Clear to Partly Cloudy	5-13	30-42	65-75

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.accuweather.com/

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

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

a) **Days after foundation pruning: 35**

b) **Pan evaporation: 7 to 11mm**

1. In many areas drizzling to good rains are expected. If the soil is in wapsa condition, then do not irrigate.
2. Before starting irrigation, check for shoot vigour. If it is still vigourous, do not irrigate. Remove excess growth/ side shoots. Canopy should not be dense.
3. After foundation pruning, during shoot growth stage, apply 11,900 – 14,450 L/acre per day of irrigation water in areas where max. temperature is below 37°C, whereas in other areas apply 14,450 – 17000 L/acre per day. If EC of the irrigation water is less than 1 dS/m, then apply 9,500 – 11,560 L/acre per day in areas where max. temperature is below 37°C whereas in other areas apply 11,560 – 14,960 L/acre per day.
4. In case vigour is more than desired, then reduce irrigation water application to 6000 – 8,500 L/ acre. Still if you are not able to control the vigour, stop irrigation till such time growth is controlled.
5. During fruit bud differentiation stage, shoot vigour to be controlled and hence, the irrigation water applied should be from 4500 to 6000 L/ acre/ day.
6. For fruit bud differentiation stage, stress needs to be given. In clayey soil as the water holding capacity is higher, please note that stress needs to be imposed early else fruitfulness will be affected.
7. 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.
8. Flooding the vineyard is not advised as it will lead to wastage of water. Concentrate irrigation water application in the root zone only.

Shoot growth stage

1. Based upon soil test value, apply Zinc sulphate @10 kg/acre along with Ferrous sulphate @10kg/acre followed by Magnesium sulphate @15kg/acre in atleast 2 splits during 5-7 leaf stage. Boron application should be strictly based upon soil and petiole test.
2. In calcareous soils, spray magnesium sulphate and potassium sulphate @2 gm each/ L during active growing stage.

3. Possibility of leaf curling, check the leaf margins, if slight to more yellow, possibility of potassium deficiency. Foliar spray of SOP @ 3g/L followed by fertigation of 20-25 kg SOP/acre in 2 to 3 splits.
4. In coloured varieties like Jumbo, Nanasaheb Purple etc., leaf curling along with reddening/ bronzing of the leaf margin can be observed if potassium deficiency is there. Foliar spray of SOP @ 3g/L followed by fertigation of 20-25 kg SOP/acre in 2 to 3 splits.

Fruit bud differentiation stage

1. Based upon soil test values, apply 20 – 25 kg phosphoric acid or 150 kg SSP in case the soils are deficient in phosphorus. Phosphoric acid application is desirable in calcareous soils. Donot apply beyond this until and unless the soil and petiole tests show low phosphorus availability.
2. Donot apply any water soluble fertilizer having nitrogen.
3. At 45 DAP, perform petiole test to know the nutrient content of the vines. The petioles should be collected from 5th leaf from the base of the shoot even counting the leaves that have been removed.
4. Apply Magnesium sulphate @ 15kg/ acre in atleast 2 splits from 45 to 55 DAP.
5. In calcareous soils, spray magnesium sulphate and potassium sulphate @ 3 gm each/ L once only during 45 to 55 DAP.
6. Keep a close watch on the development of leaf blackening symptoms if irrigation water contains sodium more than 100ppm.
7. Possibility of leaf curling, check the leaf margins, if slight to more yellow, possibility of potassium deficiency. Foliar spray of SOP @ 3-4g/L followed by fertigation of 20-25 kg SOP/acre in 2 to 3 splits.
8. In coloured varieties like Jumbo, Nanasaheb Purple etc., leaf curling along with reddening/ bronzing of the leaf margin can be observed if potassium deficiency is there. Foliar spray of SOP @ 3g/L followed by fertigation of 20-25 kg SOP/acre in 2 to 3 splits.

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

Nil

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

. **Management of grape vineyard after cyclone:**

During the last week, many of the grape vineyards experienced cyclone effect. The cyclone in other states and also in different districts of Maharashtra received heavy rainfall with high wind. This condition resulted into high vigor, tearing of leaf, breaking of shoots, etc. Under such condition, following problems may be experienced.

1) Heavy rainfall resulted into moisture saturation in the root zone as well as in soil between the rows. This will activate feeder roots (white roots). Hence, the vine may impart more vigor.
2) With the rainfall, the temperature in the vineyard is reduced and the relative humidity is increased. This will also lead to high vigor.
3) Along with the shoot growth, side shoots on the main cane will be emerging at faster rate.
4) Due to dense canopy, the pressure of disease development will be more.
5) High vigor will lead to increase in internodal length.
6) There will be sudden deficiency symptoms of potash on older leaf.
7) While the temperature is increasing, the succulency of leaf will be increasing. During this condition, thrips damage may be experienced.

Suggestions:

1) Withdraw irrigation for about 3-4 days. This will help to maintain the growth.
2) Apply potassic fertilizer through drip and foliar spray. The concentration should be depending upon soil type and shoot vigor available.
3) Shoot pinching to be followed. This will help to control the vigor.
4) Remove the side shoots on each sub cane or straight cane. This will help in reducing the microclimate thereby reducing the chances of disease incidence.
5) Apply P and K grade fertilizer through foliar spray. This will support fruit bud differentiation.
6) Spray 6 BA and Uracil with minimum concentration. This will help in maintaining cytokinin level in the vine.
7) Avoid hard pinching of growing shoots. This will lead to emergence of more side shoots and bunches on these shoots.

V. Disease management (Dr. Sujoy Saha)

Days after foundation pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
35	Nil	Nil	Nil	Nil

Regions of Sangli and adjoining areas receiving light to moderate drizzles application of Thiophenate methyl @1g/L tank mixed with Mancozeb@2g/L may be given to protect from anthracnose and bacterial spot diseases. In early pruned areas application of copper hydroxide @ 1.5-2g/l if it is in 3-5 leaf stages. Drip application of Trichoderma may be continued in areas receiving rainfall. In some areas of Nashik, where bacterial spot is incident application of Mancozeb @2g/litre may be given.

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

Days after pruning	Risk of pests				
	Mealybug	**Mite**	**Thrips/leafhopper**	**Caterpillar**	**Flea beetle**
Early shoot growth	Moderate	Nil	Moderate	Low to moderate	Moderate to High
New vineyards	Moderate	Nil	Very high	Low to moderate	Moderate

- Give preventive spray of imidacloprid 17.8 SL @ 0.4 ml per litre water at the time of bud sprouting after April pruning to manage flea beetle and mealybug shoot malformation.
- For flea beetle management during early shoot growth, spray imidacloprid 17.8 SL @ 0.4 ml per litre or fipronil 80 WG @ 0.06 g per litre or lambda cyhalothrin 4.9 CS @ 0.5 ml per litre water during early morning hours or late evening. If that is not found sufficient to manage flea beetle, give soil drenching of imidacloprid 17.8 SL @ 1.5 ml per vine also.

- For thrips management in new vineyards or new shoot growth after April pruning, give regular applications of effective insecticides such as spinosad 45 SC @ 0.25 ml/l, spinetoram 11.7 SC @ 0.3 ml/l, cyantraniliprole 10 OD @ 0.7 ml/l, emamectin benzoate 5 SG @ 0.22g/l or fipronil 80 WG @ 0.0625 g/l water when thrips population is 5 per shoot or above.
- In case of caterpillar infestation, the sprays of spinetoram 11.7 SC @ 0.3 ml/l, cyantraniliprole 10 OD @ 0.7 ml/l, emamectin benzoate 5 SG @ 0.22g/l or fipronil 80 WG @ 0.0625 g/l water given for thrips management will help in managing caterpillars too.

Install light traps to monitor emergence of *Stromatium barbatum* stem borer adults. Watch the following video for detailed information on its management on NRCG's YouTube channel https://www.youtube.com/watch?v=Yvx7dIbPEAU