WEATHER DATA FOR THE PREVAILING WEEK

Date of Foundation Pruning: 15/04/2021

Wednesday (12/05/2021)–Wednesday (19/05/2021)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min-Max	R H%	
	Min	Max				Min	Max
Nashik	23-30	35-40	Nashik, Dindori, Ozar, Palkhed, , Vani, Loni, Pimpalgaon Baswant, Niphad, Shirdi, Devla, Kalwan Tue- Good Rain.	Clear to Partly Cloudy	3-15	16-41	38-79
Pune	20-26	26-37	Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Patas, Yavat, Supa, Narayangaon, Baramati Mon & Tue- Good Rain. Junnar Sun to Tue- Good Rain.	Clear to Partly Cloudy	3-17	20-68	45-84
Solapur	17-25	30-41	Solapur, Vairag, Nannaj, Kati, Pangri, Osmanabad, Kasegaon, Atpadi, Latur, Ausa, Tuljapur, Barshi, Pandharpur Mon & Tue- Good Rain.	Clear to Partly Cloudy	4-17	18-62	37-78
Sangli	21-27	25-38	Sangli,Kagvad, Shetfal, Palsi, Palus, Khanapur, Vita, Tasgaon, Shirguppi, Arag, Miraj, Walva, Kawthe Mahakal Sun- Light Rain. Mon & Tue- Good Rain.	Clear to Partly Cloudy	3-14	23-77	50-89
Vijayapura	18-25	27-39	Vijayapura, Chadchan, Tikota, Telsang Sun & Tue- Light Rain. Mon- Good Rain.	Clear to Partly Cloudy	4-15	28-70	50-84
Hyderabad	21-26	31-40	Hyderabad, Medchal, Zahirabad Mon- Good Rain. Tue- Moderate Rain.	Clear to Partly Cloudy	5-14	22-57	47-85
Satara	20-25	24-36	Satara, Khatav, Man, Phaltan Sat- Moderate Rain. Sun- Light Rain. Mon & Tue- Good Rain.	Clear to Partly Cloudy	2-17	24-79	53-90
Ahmednagar	20-27	30-41	Ahmednagar,Nagar,Jamkhed,Sangamner,Shrigonda,Karjat, Akole,Kopargaon, Rahata Sun- Drizzling. Mon & Tue- Good Rain.	Clear to Partly Cloudy	5-18	15-65	33-83
Jalna	22-28	34-40	Jalna Sun & Mon- Light Rain. Tue- Good Rain. Ambad Sat- Moderate Rain. Sun & Mon- Light Rain. Tue- Good Rain. Jafrabad, Mantha, Gansawangi Tue- Moderate Rain.	Clear to Partly Cloudy	2-12	15-41	26-62
Buldhana	24-28	39-41	Buldana, Chikhli, D.raja, Sindkhedraja Sun- Drizzling. Tue- Moderate Rain.	Clear to Partly Cloudy	3-10	16-32	25-57

Kolhapur	22-29	23-39	Gagan-bavada, Kagal, Karveer Fri- Light Rain. Sun- Moderate Rain. Mon & Tue- Good Rain.	Clear to Partly Cloudy	5-17	19-83	57-92
Bengaluru Rural	19-22	25-35	Bangaluru-east, Bangaluru-north, Bangaluru-south, Doddaballapur, Anekal Fri- Moderate Rain. Sat to Mon- Good Rain. Tue- Drizzling.	Clear to Partly Cloudy	4-13	33-79	76-89
Belagavi	22-26	23-34	Belagavi, Athni,Chikodi, Gokak, Khanapur Fri & Sat- Light Rain. Sun to Tue- Good Rain.	Clear to Partly Cloudy	3-17	31-86	62-95
Bidar	18-24	33-39	Bidar, Basavakalyan, Humnabad Mon- Good Rain. Tue- Moderate Rain.	Clear to Partly Cloudy	3-16	21-46	40-78
Bagalkot	19-25	24-36	Bagalkot, Bilagi, Badami, Hungund, Jamkhandi, Mudhol Sun to Tue- Good Rain.	Clear to Partly Cloudy	5-19	30-71	51-85

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: 28**

b) **Pan evaporation: 8 to 10mm**

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 13,600 – 17,000 L/acre per day of irrigation water. If EC of the irrigation water is less than 1 dS/m, then apply 10,880 – 13,600 L/acre per day.

4. In case vigour is more than desired, then reduce irrigation water application to 6,800 – 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 5000 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. Apply 50 kg urea/ acre in 5-6 splits after sprouting. In calcareous soils, donot apply urea, instead use Ammonium sulphate @ 85 kg/acre in atleast 7-8 splits from sprouting onwards.
2. In case of vigorous growth of shoots, stop nitrogen application and wait for the growth to stabilize before resuming nitrogen application. If still the growth continues, then reduce irrigation. Then resume when growth is maintained at desired level.
3. 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.
4. In calcareous soils, spray magnesium sulphate and potassium sulphate @2 gm each/ L during active growing stage.
5. 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.

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.

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

Nil

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

Management in new vineyard:

With the unseasonal rains and hailstorm in many of the grape vineyard, following problems are encountered. Considering this, following advice is listed as below.

1. Since the temperature in the vineyard is reduced and the RH is increased, this condition will support for increase in shoot growth. This will also lead to increase in side shoots thereby creating the dense canopy.
2. Hence, application of potassic fertilizer through spray and drip based on the vigor to be considered.
3. Removal of side shoots on priority will help to receive the sunlight on every bud.
4. Spray of 6 BA and Uracil based on the vigor will support to enhance the fruit bud differentiation.
5. In some of the vineyard, high vigor will lead to increase in intermodal length thereby reducing the chances of fruit bud differentiation. Under such condition, the fertilizer containing P and K may be given.

6. Since the moisture in root zone is sufficient and also the RH in canopy, spraying of biologicals like Trichoderma will help in controlling the diseases.

Management in old vineyard:

In many of the vineyard sprouting of main bud (tiger bud) is being observed. To control this following practices to be followed.

1. Do not pinch the growing shoot for a period of about one week.
2. Allow the side shoots to grow for some more time (2-3 leaf)
3. Spray urea @2.0 to 2.5 g/L water. This will help to boost the growth and thus the bud will not sprout.
4. Avoid spraying of cytokinin based PGR.

Increase the irrigation just for 2 days. This will support the shoot vigor so that the sprouting of bud will be stopped.

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V. Disease management (Dr. Sujoy Saha)

Days after foundation pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
28	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**
Sprouting to 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.