WEATHER DATA FOR THE PREVAILING WEEK

Date of Foundation Pruning: 15/04/2021

Wednesday (11/08/2021)–Wednesday (18/08/2021)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min-Max	R H%	
	Min	Max				Min	Max
Nashik	22-23	30-32	**Nashik, Dindori, Ozar, Palkhed, , Vani, Loni, Pimpalgaon Baswant, Shirdi, Kalwan** Fri to Tue- Light to Moderate Rain.	Mostly Cloudy	18-27	65-74	91-95
Pune	20-21	27-28	**Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Patas, Yavat, Supa, Narayangaon, Baramati** Fri to Tue- Drizzling to Light Rain.	Partly Cloudy	18-24	56-63	84-88
Solapur	22-23	33-34	**Solapur, Vairag, Nannaj, Kati, Pangri, Osmanabad, Latur, Ausa, Tuljapur, Pandharpur, Barshi, Atpadi, Kasegaon** Fri to Mon- Light to Moderate Rain. Tue- Good Rain.	Partly to Mostly Cloudy	18-23	41-49	71-79
Sangli	20-21	29-30	**Sangli, Miraj, Palus, Kagvad, Shetfal, Palsi, Khanapur, Vita, Tasgaon, Shirguppi, Arag, Walva, Kawthe** Fri to Tue- Moderate to Good Rain.	Mostly Cloudy	16-21	58-62	89-93
Vijayapura	21-22	31-32	**Vijayapura, Chadchan**, **Tikota, Telsang** Fri to Tue- Good Rain.	Mostly Cloudy	21-26	50-59	83-85
Hyderabad	23-24	28-31	**Hyderabad, Medchal, Zahirabad** Fri to Tue- Good Rain.	Mostly Cloudy	12-17	58-74	83-90
Satara	20	27-29	**Satara, Phaltan, Man, Khatav Rahata** Fri, Mon & Tue- Light Rain.	Partly to Mostly Cloudy	12-19	58-67	89-93
Ahmednagar	21-22	30-31	**Ahmednagar, Nagar, Kopargaon, Shrigonda, Karjat, Jamkhed, Akole, Rahata, Sangamner** Fri to Mon- Light Rain. Tue- Good Rain.	Partly to Mostly Cloudy	16-28	52-59	77-86
Jalna	22	31-32	**Jalna, , Jafrabad, Mantha, Ambad, Gansawangi** Fri to Tue- Light to Moderate Rain.	Mostly Cloudy	17-19	47-50	78-83
Buldhana	22-23	31-32	**Buldana, Chikhli, D.raja, Sindkhedraja** Fri to Tue- Light to Moderate Rain.	Mostly Cloudy	17-19	53-56	83-89
Kolhapur	22-23	30-31	**Gagan-bavada, Kagal, Karveer** Fri to Tue- Moderate to Good Rain.	Mostly Cloudy	8-10	70-75	94-97
Bengaluru Rural	19-20	27-28	**Bangaluru-east, Bangaluru-north, Bangaluru-south, Doddaballapur, Anekal** Fri to Wed- Good Rain.	Mostly cloudy	16-19	51-60	86-89

Belagavi	21-22	28-30	**Belagavi, Athni, Chikodi, Gokak, Khanapur** Fri to Wed- Moderate to Good Rain.	Mostly cloudy	14-19	69-73	93-96
Bidar	21-22	29-32	**Bidar, Basavakalyan, Humnabad** Fri to Wed- Moderate to Good Rain.	Mostly cloudy	12-17	56-69	80-89
Bagalkot	21	30-31	**Bagalkot, Bilagi, Jamkhandi, Mudhol, Hungund, Badami** Fri to Wed- Moderate to Good Rain.	Mostly cloudy	21-25	49-56	81-87

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:** 117

b) **Pan evaporation:** : Nil - 3mm

Amount of irrigation advised:

1. All the grape growing regions are forecasted to receive rains. The irrigation water application should be based upon the growth of the vines. Objective is to concentrate on cane maturity, hence, vigour should be controlled.
2. **Cane maturity stage:** Apply irrigation through surface drip @ 1500 to 2000 L/acre per day.
3. Flooding the vineyard is not advised as it leads to wastage of water. Concentrate irrigation water application in the root zone only.
4. If continuous good rains are forecasted, remove the mulch and allow the bund/ rootzone to be fully wet with water for leaching of salts. The mulch so removed can be mixed with the soil to improve the soil porosity.This is especially important for the following conditions:
    i) In Solapur, Sangli and Bijapur where the ground water used for irrigation contains more salt.
    ii) Early pruning is planned either in July or August.

Nutrient management

1. After current rains, give foliar spray of SOP @ 3-5 g/L depending upon canopy.
2. In case of calcareous soils where acute iron deficiency is observed, repeatedly spray 2-3g/L Ferrous sulphate two to three times at 3 days interval followed by 15-20 kg/ acre Ferrous sulphate application through drip. The fertigation dose should be split into atleast 3 doses of 5kg each. Apply 5kg/ acre soluble sulphur through drip every week. Also spray magnesium sulphate and potassium sulphate @ 3 gm each/ L once only. Keep a close watch on the development of leaf blackening symptoms if irrigation water contains sodium more than 100ppm.
3. 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.
4. If the leaf yellowing starts from in between the leaf veins then, possibility of magnesium deficiency is there. Foliar spray of Magnesium sulphate @ 3-4g/L followed by fertigation of 15-20 kg magnesium sulphate/acre in 2 to 3 splits.
5. In coloured varieties like Jumbo, Nanasaheb Purple Seedless 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.
6. In calcareous soils, provide foliar application of Sulphate of Potash and Magnesium sulpahte each (@ 4g/L once in this growth stage.

Pre-pruning operations – Fruit pruning season

1. In case pruning is planned during August - September, raise Sunnhemp or Dhaincha for green manuring purpose.
2. The vineyards where sodicity problems are there, apply gypsum to the soil for removal of sodium from the soil exchange complex. In case of calcareous soils, use sulphur for similar purpose. The application should be alongwith FYM/compost etc. They should be mixed in the soil and not left on the top.
3. In case of calcareous soils, if SSP is applied as basal dose, mix with FYM/compost etc. to avoid phosphorus fixation.
4. Test the soil and irrigation water, to plan for nutrient and water management during fruit pruning season.

5. In areas where rains have not been received and the irrigation water availability is less, it is suggested to flood the rootzone(only) with water to leach out the salts and wet the entire soil depth before pruning and then cover with mulch. Thereafter irrigate as per availability of water.

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

Nil

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

Following practices are suggested.

1. In the flood affected area, majority of the vineyards are suffering from leaf fall, diseases and cane maturity problem. Based on this, following management practices are suggested
2. The silt deposit on leaf will reduce the chlorophyll production. Under severe condition, the silt will hamper photosynthesis thereby reducing storage of food material in the cane. Under such situation, the growers are advised to wash the leaf using water spray.
3. Under the condition of leaf fall in the vineyard the growers are advised to allow new shoot growth till 7 to 8 leaf. The new shoots are then to be pinched at 6 to 7 leaf. This will help in controlling bud sprouts on basal portion of cane.
4. If the leaf fall is maximum (up to 80%), the grower is advised to complete fruit pruning within a week. The delay may lead to sprouting of buds on the cane.
5. Under the condition of leaf fall with cane maturity up to 4-5 bud only, the fruit pruning may result into fillage or production of very small buds. Hence, avoid the pruning and allow the new shoot to grow and then apply potash through spray and soil application.
6. Do not irrigate the vineyard for about 8 – 10 days.
7. Do not apply fertilizers through soil for about a week.
8. The old leaf will have infection of rust. Hence, spray chlorothanolil @ 1.5 g/L water to control.

9. Preference to be given for control of diseases through biologicals means. Since the relative humidity in the atmosphere is high, the multiplication rate will be higher thus will help to control the diseases.
10. To achieve cane maturity, apply potash @ 4 to 5 g per litre water and also through soil (3 to 4 kg/acre).
11. Shoot pinching and removal of side shoots will help to advance cane maturity.
12. Pruning based on bud testing or using our earlier experience should be done.
13. Pasting of canes with hydrogen cyanamide can be done till second day. Generally, 8-10 mm cane diameter with 35 to 40^0C will require about 35 to 40 ml hydrogen cyanamide/L water.
14. Under the condition of cane maturity, remove green shoots regularly. The delay in removal will lead to infestation due to downy mildew and anthracnose.
15. Train the shoots on wire. This will help to provide aeration in the canopy thereby reducing the chances of increasing RH required for disease spread.
16. Do not allow the shoots to hang down on the ground surface. This will help in controlling the diseases.

V. Disease management (Dr. Sujoy Saha)

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

Thiophenate methyl @1g/L may be given to protect from anthracnose disease. In areas of Nashik, Sangli and Solapur, where bacterial spot is incident application of Mancozeb @2.5g/litre may be given. This will give an additional control of downy mildew. Application of Streptocycline in grapes is not advisable. Dusting of Mancozeb @4-5kg/acre during this wet and humid conditions will be effective against downy mildew. In some pockets of Nashik and Solapur where downy mildew is present application of potassium salt of active phosphorus@ 4g/l + Mancozeb@2.0g/L should be done. Drip application of Trichoderma may be continued in areas receiving rainfall. Foliar spray of Trichoderma may also be given @2- 3ml/L but it should not be given immediately after application of copper fungicides. If bacterial spot and anthracnose are incident together a ready-mix of kasugamycin + copper oxychloride @0.75g/l may be applied twice at an interval of 10 days.

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

1. Due to reduction in temperature and cloudy conditions, mealybug infestation may be noticed. Use of broad spectrum insecticides should be avoided for mealybug control. Buprofezin 25 SC @ 1.25 ml/l water may be given to manage mealybugs. Preventive plant wash, on stem and cordons, of biocontrol agents such as *Verticillium, Metarhizium, Beauveria* may be given.
2. In case of thrips or caterpillar infestation, remove excess canopy. Application of fipronil 80 WG @ 0.0625 g per litre or emamectin benzoate 5 SG @ 0.22 g per litre water is effective. Light traps may be installed outside the vineyards to manage moths for reducing caterpillar infestation.
3. Mite infestation may start appearing, therefore, monitor the vineyards carefully. If mite infestation is observed, sulphur 80 WDG @ 1.5-2.0 gram per litre or abamectin 1.9 EC @ 0.75 ml/l water is effective.
4. Red colour stem borer (*Dervishiya cadambae*) has started egg laying and infestation under bark in grape areas. Install light traps near the vineyards to manage moths of this stem borer. Remove loose bark from stem and cordons and give preventive wash on stem and cordons with biocontrol agent *Metarhizium* @ 3-5 ml per litre water minimum once in the month during July to September months. If infestation is observed, remove the loose bark and give stem and cordon wash with lambda cyhalothrin 5 CS @ 2.5 ml per litre water and 1.5-2 litres water per plant.
5. In new vineyards, flea beetle infestation may be observed. In case of heavy infestation, give soil drenching with imidacloprid 17.8 SL @ 1.5 ml per plant and foliar application with spinetoram 11.7 SC @ 0.3 ml per litre or fipronil 80 WG @ 0.0625 g per litre water.