WEATHER DATA FOR THE PREVAILING WEEK

Date of Foundation Pruning: 15/04/2021

Wednesday (04/08/2021)–Wednesday (11/08/2021)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min-Max	R H%	
	Min	Max				Min	Max
Nashik	23-24	28-31	**Nashik, Dindori, Ozar, Palkhed, , Vani, Loni, Pimpalgaon Baswant, Shirdi, Kalwan** Wed to Mon- Moderate to Good Rain.	Mostly Cloudy	22-30	73-83	91-93
Pune	20-21	26-28	**Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Patas, Yavat, Supa, Narayangaon, Baramati** Wed to Sun- Light Rain. Tue- Moderate Rain.	Mostly Cloudy	22-28	67-72	85-87
Solapur	21-22	31-33	**Solapur, Vairag, Nannaj, Kati, Pangri, Osmanabad, Latur, Ausa, Tuljapur, Pandharpur, Barshi, Atpadi, Kasegaon** Wed to Tue- Light Rain.	Partly to Mostly Cloudy	21-29	51-54	74-80
Sangli	21-22	29-30	**Sangli, Miraj, Palus, Kagvad, Shetfal, Palsi, Khanapur, Vita, Tasgaon, Shirguppi, Arag, Walva, Kawthe Mahakal** Wed to Mon- Moderate Rain. Tue- Light Rain.	Mostly Cloudy	24-30	64-69	87-89
Vijayapura	21-22	30-32	**Vijayapura, Chadchan**, **Tikota, Telsang** Wed- Moderate Rain. Thu to Sat & Tue- Light Rain. Sun- Good Rain.	Mostly Cloudy	27-34	55-63	79-83
Hyderabad	22-23	30-32	**Hyderabad, Medchal, Zahirabad** Wed to Tue- Drizzling to Light Rain.	Partly to Mostly Cloudy	21-26	53-61	79-82
Satara	21	26-28	**Satara, Phaltan, Man, Khatav Rahata** Wed to Tue- Light to Moderate Rain.	Partly to Mostly Cloudy	19-28	71-75	89-90
Ahmednagar	21-22	29-31	**Ahmednagar, Nagar, Kopargaon, Shrigonda, Karjat, Jamkhed, Akole** Wed to Tue- Light Rain. **Rahata, Sangamner** Sun- Light Rain.	Partly to Mostly Cloudy	26-33	56-62	80-85
Jalna	22-23	27-31	**Jalna, , Jafrabad, Mantha** Thu, Fri & Mon- Light Rain. Sat & Sun- Good Rain. **Ambad, Gansawangi** Thu to Mon- Drizzling to Light Rain.	Mostly Cloudy	17-21	50-64	79-84
Buldhana	21-22	26-31	**Buldana, Chikhli, D.raja, Sindkhedraja** Thu & Fri- Light Rain. Sat to Tue- Good Rain.	Mostly Cloudy	16-24	56-73	84-90

Kolhapur	23	29-32	**Gagan-bavada, Kagal, Karveer** Wed to Tue- Moderate to Good Rain.	Mostly Cloudy	10-16	75-88	94-96
Bengaluru Rural	19-20	28-29	**Bangaluru-east, Bangaluru-north, Bangaluru-south, Doddaballapur, Anekal** Fri, Sat & Mon- Light Rain. Sun- Moderate Rain.	Mostly cloudy	18-27	52-54	78-86
Belagavi	21-22	25-30	**Belagavi, Athni, Chikodi, Gokak, Khanapur** Thu to Tue- Moderate Rain.	Mostly cloudy	16-23	76-88	93-96
Bidar	21	30-33	**Bidar, Basavakalyan, Humnabad** Thu- Good Rain. Fri to Tue- Light Rain.	Mostly cloudy	18-24	50-66	82-85
Bagalkot	21-22	28-32	**Bagalkot, Bilagi, Jamkhandi, Mudhol, Hungund, Badami** Thu to Sun- Light to Moderate Rain. Mon- Good Rain.	Mostly cloudy	22-34	50-64	76-84

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:** 110

b) **Pan evaporation:** : Nil - 4mm

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. Remove mulch cover on the bund and allow the rain water to seep into the soil. This will leach the accumulated salts in the rootzone. The mulch so removed can be mixed with the soil to improve the soil porosity.

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 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. Potassium application is required from Cane maturity stage onwards. Approx. 64 kg of sulphate of potash (soluble grade) should be applied in this stage. Split the application into atleast five doses to reduce the leaching losses of the potassium. Apply 15 kg SOP in two – three splits during this week.
7. 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.

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

Nil

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

Following practices are suggested.

Considering the rainfall and cloudy weather in majority of grape growing area, following practiced are suggested.

1. In the vineyard where fruit pruning is completed, during the bud sprouting day, fillage may be a major problem. Under such situation, application of potash through @ 1.5 to 2.0 g/L water and application of 1.5 to 2.0 kg potash /acre through soil will help to control the problem.
2. Application of recommended dose of cytokinin based PGR during the stage of bud sprouts will help to avoid fillage.
3. Under the condition of pre-pruning in vineyard, leaf removal to be completed well before actual pruning so that the canes will get sufficient sunlight that will help for bud swelling.
4. Bud testing before fruit pruning can be considered important. This will help in identifying the bud position on each category of cane.
5. Collect 4 to 5 canes of different categories (sub cane, straightcane, 6 mm, 8 to 10mm and more diameter) and send to laboratory for bud testing.
6. Leaf removal fall on each vine should be completed 4 to 5 days before fruit pruning. This will help for complete bud swelling.
7. If the cane maturity is not achieved, fruit pruning need to be delayed by about 15 days. Pruning of vine without cane maturity may lead to fillage and converting the bunch into fillage.
8. To achieve cane maturity, apply potash @ 4 to 5 g per litre water and also through soil (3 to 4 kg/acre).
9. Shoot pinching and removal of side shoots will help to advance cane maturity.
10. Pruning based on bud testing or using our earlier experience should be done.
11. 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.
12. Under the condition of cane maturity, remove green shoots regularly. The delay in removal will lead to infestation due to downy mildew and anthracnose.
13. 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.
14. 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)
110	Low	Low	High	Bacterial spot

In all regions, moderate to heavy rainfall is predicted in the coming week. Application of 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. 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. If the infection of downy mildew is severe, one spray of Dimethomorph or mandipropamid @1g/L may be given. 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. Use of silicon-based sticker will increase the efficacy of spray chemicals. It is to be noted that, water volume per acre (approx. 400 litres) or per hectare (approx. 1000 litres) should be maintained. Sporadic incidence of powdery in some vineyards may be controlled by sulphur@2g/l. Application of Streptocycline in grapes is not advisable. Excess application of Bordeaux may be avoided

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.