WEATHER DATA FOR THE PREVAILING WEEK

Date of Foundation Pruning: 15/04/2021

Wednesday (21/07/2021)–Wednesday (28/07/2021)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min-Max	R H%	
	Min	Max				Min	Max
Nashik	25-26	27-32	**Nashik, Dindori, Ozar, Palkhed, , Vani, Loni, Pimpalgaon Baswant, Shirdi, Kalwan** Fri to Tue- Moderate to Good Rain.	Partly to Mostly Cloudy	20-26	67-79	86-89
Pune	23	27-31	**Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Patas, Yavat, Supa, Narayangaon, Baramati** Thu to Tue- Moderate to Good Rain.	Mostly Cloudy	17-26	67-78	85-89
Solapur	21-22	28-32	**Solapur, Vairag, Nannaj, Kati, Pangri, Osmanabad, Latur, Ausa, Tuljapur, Pandharpur, Barshi, Atpadi, Kasegaon** Fri to Tue- Moderate to Good Rain.	Partly to Mostly Cloudy	16-31	55-73	79-87
Sangli	22-23	28-31	**Sangli, Miraj, Palus** Fri & Sun- Light Rain. Sat, Mon & Tue- Moderate to Good Rain. **Kagvad, Shetfal, Palsi, Khanapur, Vita, Tasgaon, Shirguppi, Arag, Walva, Kawthe Mahakal** Fri to Tue- Moderate to Good Rain.	Mostly Cloudy	21-30	69-81	87-92
Vijayapura	21-33	24-32	**Vijayapura, Chadchan**, **Tikota, Telsang** Fri to Tue- Moderate to Good Rain.	Mostly Cloudy	5-9	60-88	87-97
Hyderabad	21-23	26-30	**Hyderabad, Medchal, Zahirabad** Fri, Sat, Mon & Tue- Good Rain. Sun- Light Rain.	Partly to Mostly Cloudy	18-22	56-72	81-85
Satara	21-22	26-30	**Satara, Phaltan** Sun & Mon- Light Rain. Fri & Tue- Good Rain. **Man, Khatav Rahata** Fri to Tue- Light Rain	Partly to Mostly Cloudy	17-22	72-82	89-92
Ahmednagar	23	27-32	**Ahmednagar, Nagar, Kopargaon, Sangamner, Shrigonda, Karjat, Jamkhed, Akole, Rahata** Fri to Tue- Moderate to Good Rain.	Partly to Mostly Cloudy	20-29	61-76	82-88
Jalna	23-24	27-33	**Jalna, Ambad, Jafrabad, Mantha, Gansawangi** Fri to Tue- Moderate to Good Rain.	Mostly Cloudy	14-34	54-78	81-89

Buldhana	23-24	27-33	**Buldana, Chikhli, D.raja, Sindkhedraja** Fri to Wed- Moderate to Good Rain.	Mostly Cloudy	14-33	54-79	84-90
Kolhapur	23-24	26-29	**Gagan-bavada, Kagal, Karveer** Fri to Wed- Good Rain.	Mostly Cloudy	12-21	80-89	91-94
Bengaluru Rural	20-21	27-30	**Bangaluru-east, Bangaluru-north, Bangaluru-south, Doddaballapur, Anekal** Fri to Wed- Moderate to Good Rain.	Mostly cloudy	21-28	53-68	84-89
Belagavi	23	25-29	**Belagavi, Athni, Chikodi, Gokak, Khanapur** Fri to Wed- Good Rain.	Mostly cloudy	18-28	71-83	87-92
Bidar	20-21	26-31	**Bidar, Basavakalyan, Humnabad** Fri to Wed- Good Rain.	Mostly cloudy	14-27	60-83	83-91
Bagalkot	22-23	26-31	**Bagalkot, Bilagi, Jamkhandi, Mudhol, Hungund, Badami** Fri to Wed- Good Rain.	Mostly cloudy	23-28	57-75	80-88

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:** 97

b) **Pan evaporation:** : 2-4 mm

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. In case rain exceeds 5 mm on a given day, irrigation water application can be skipped for that day. Generally, under wapsa (field capacity) condition of the soil, donot give irrigation.
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.

Cane maturity stage

1. 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. In calcareous soils, provide foliar application of Sulphate of Potash (@ 4g/L) once in this growth stage.
2. Apply magnesium sulphate @ 15 kg/acre in two splits. The application should be done during 60-75 days after pruning. In calcareous soils, provide foliar application of Magnesium sulphate (@3g/L) 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 in 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)

In the last week, we are experiencing rainfall and continuous clody weather. At present, early fruit pruning is done. Based on this following practiced are suggested.

1. In the vineyard where fruit pruning is being taken, leaf removal either using chemicals or manual is important.
2. Leaf fall on each vine should be completed 4 to 5 days before fruit pruning. This will help for complete bud swelling.
3. Bud testing before fruit pruning can be considered important. This will help in identifying the bud position on each category of cane.
4. 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.
5. To maintain the fresh bud, all the canes are to be wrapped in wet gunny cloth.
6. 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.
7. To achieve cane maturity, apply potash @ 4 to 5 g per litre water and also through soil (3 to 4 kg per acre).
8. Shoot pinching and removal of side shoots will help to advance cane maturity.
9. Pruning based on bud testing or using our earlier experience should be done.
10. Pasting of canes with hydrogen cyanamide can be done till second day.
11. Concentration depends on cane diameter and weather conditions available in that grape vineyard. Generally, 40 ml hydrogen cyanamide per litre water is sufficient for 8 to 10 mm canes with 35 to 40 degrees celcius temperature.
12. During bud sprouts, if rain continues, increase in cytokinin levels in vine is important. Hence, cytokinin based PGR should be used through spray.
13. Removal of excess shoots can be done during 14 to 17 days period. This will help to control the bunch rot.

V. Disease management (Dr. Sujoy Saha)

Days after foundation pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
97	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.

   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