WEATHER DATA FOR THE PREVAILING WEEK

Date of Foundation Pruning: 15/04/2021

Wednesday (09/06/2021)–Wednesday (16/06/2021)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min-Max	R H%	
	Min	Max				Min	Max
Nashik	23-24	32-33	Nashik, Dindori, Ozar, Palkhed, , Vani, Loni, Pimpalgaon Baswant, Shirdi, Kalwan Thu to Tue- Light Rain.	Clear to Partly Cloudy	07-18	56-61	86-87
Pune	20-22	27-30	Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Patas, Yavat, Supa, Narayangaon, Baramati Fri & Mon- Moderate Rain.	Partly Cloudy	06-17	41-59	81-83
Solapur	20-21	30-33	Solapur, Vairag, Nannaj, Kati, Pangri, Osmanabad, Latur, Ausa, Tuljapur, Pandharpur, Barshi, Atpadi, Kasegaon Thu to Tue- Moderate to Good Rain.	Clear to Partly Cloudy	10-17	46-55	70-80
Sangli	20-22	26-29	Sangli,Kagvad, Shetfal, Palsi, Palus, Khanapur, Vita, Tasgaon, Shirguppi, Arag, Miraj, Walva, Kawthe Mahakal Sun to Tue- Good Rain.	Mostly Cloudy	09-15	51-67	78-88
Vijayapura	20-22	28-32	Vijayapura, Chadchan, Tikota, Telsang Mon & Tue- Moderate Rain.	Partly Cloudy	12-21	51-62	77-80
Hyderabad	19-21	29-32	Hyderabad, Medchal, Zahirabad Fri, Mon & Tue- Good Rain.	Mostly cloudy	07-19	49-64	73-83
Satara	20-21	24-28	Satara, Man, Khatav, Phaltan Fri to Mon- Light Rain. Tue- Good Rain.	Clear to Partly Cloudy	09-15	55-74	83-93
Ahmednagar	21-22	32-34	Ahmednagar, Nagar, Kopargaon, Rahata, Sangamner, Shrigonda, Akole, Karjat, Jamkhed Fri, Sun & Tue- Good Rain. Sat & Mon- Moderate Rain.	Partly Cloudy	06-13	49-54	79-80
Jalna	21-23	29-32	Jalna, Ambad, Jafrabad Tue- Moderate Rain. Mantha, Gansawangi Fri & Tue- Moderate Rain.	Clear to Partly Cloudy	04-12	37-41	63-67
Buldhana	23-25	35-37	Buldana, Chikhli, D.raja, Sindkhedraja Fri to Tue- Light Rain.	Partly Cloudy	07-16	40-43	67-70
Kolhapur	21-23	24-28	Gagan-bavada, Kagal, Karveer Fri to Tue- Good Rain.	Mostly Cloudy	09-18	69-95	92-97

Bengaluru Rural	20-21	27-31	Bangaluru-east, Bangaluru-north, Bangaluru-south, Doddaballapur, Anekal Fri to Tue- Light Rain.	Clear to Partly Cloudy	06-15	46-61	80-87
Belagavi	22-23	23-29	Belagavi, Athni, Chikodi, Gokak, Khanapur Fri to Sun- Light Rain. Mon & Tue- Good Rain.	Mostly cloudy	07-15	61-89	88-94
Bidar	18-20	29-32	Bidar, Basavakalyan, Humnabad Fri, Sat & Mon- Good Rain. Sun & Tue- Light Rain.	Partly Cloudy	07-18	50-63	75-85
Bagalkot	21-22	25-30	Bagalkot, Bilagi, Jamkhandi, Mudhol, Hungund, Badami Mon & Tue- Light to Moderate Rain.	Partly Cloudy	11-20	44-59	73-76

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: 56**

b) **Pan evaporation: 4 to 6mm**

Amount of irrigation advised:

1. All the grape growing regions are forecasted to receive from drizzling to moderate 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. **Fruit Bud Differentiation stage:**
    a. Apply irrigation through surface drip @ 2500 to 4000 L/acre per day.

b. 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.
c. Flooding the vineyard is not advised as it leads to wastage of water. Concentrate irrigation water application in the root zone only.

3. **Cane maturity stage:** Apply irrigation through surface drip @ 2500 to 4000 L/acre per day.
4. In case of monsoon rains, 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

Fruit bud differentiation stage

1. After current rains, give foliar spray of SOP @ 3-4 g/L depending upon canopy.
2. 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.
3. Donot apply any water soluble fertilizer having nitrogen.
4. 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.
5. Apply Magnesium sulphate @ 15kg/ acre in atleast 2 splits from 45 to 55 DAP.
6. Check for any interveinal leaf yellowing or marginal leaf yellowing. Interveinal veinal leaf yellowing means lime induced iron deficiency due to calcareous soil. Yellowing of leaf margin coupled with curling means potassium deficiency.
7. To effectively manage calcareous soil, apply 5kg/ acre soluble sulphur through drip every week. Follow it up with foliar spray of ferrous sulphate @2g/L twice at 3 days interval and apply 15-20kg/acre ferrous sulphate thgrough drip. Also spray magnesium sulphate and potassium sulphate @ 3 gm each/ L once only.
8. Keep a close watch on the development of leaf blackening symptoms if irrigation water contains sodium more than 100ppm.

9. 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.
10. 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. After current rains, give foliar spray of SOP @ 4-5 g/L depending upon canopy.
2. 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.
3. 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.
4. 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.
5. To effectively manage calcareous soil, apply 5kg/ acre soluble sulphur through drip every week. Also spray magnesium sulphate and potassium sulphate @ 3 gm each/ L once only.

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

Nil

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

Canopy management practices to be followed

During the last week, majority of grape vineyards received good rainfall and the same is continuing with cloudy condition. This is resulting into reduced sunlight. Considering this, following suggestions are offered.

1) In the late pruned vineyard, there may be problem of fruit bud differentiation. Hence, leaf removal at the basal portion on shoot (2-3 leaf) may help to receive sunlight on the buds. Removal of side shoots will also support for receiving the sunlight.
2) The vigor may be high. This will create the problem for fruit bud differentiation and disease like anthracnose. Hence, shoot pinching should be given priority.
3) With the increase in vigor, the cane maturity may get delayed. Hence, application of potassic fertilizer and control of vigor by shoot tip removal to be dine.
4) In new vineyard, extension of cordon can be taken up. Since we have sufficient time for fruit pruning, this can be taken up.
5) In majority of the vineyard, irregular cane maturity is being observed. Hence, recommended sprays may be taken.

V. Disease management (Dr. Sujoy Saha)

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

In 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 Bordeaux mixture (1%)/copper hydroxide @ 1.5-2g/l may be done. 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. Foliar spray of Trichoderma may also be given @2-3ml/L but it should not be given immediately after application of copper fungicides. It is advised not to spray any systemic fungicides in this season. In 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 Bordeaux mixture (1%)/copper hydroxide @ 1.5-2g/l may be done. 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. If rainfall is continuous, dusting of Mancozeb 75WP @3-5kg/ acre may be done. Foliar spray of Trichoderma may also be given @2-3ml/L but it should not be given immediately after application of copper fungicides. It is advised not to spray any systemic fungicides in this season. In some regions of Sangli, where powdery mildew is observed, application of sulphur @2g/L may be done. It is advised not to use any systemic fungicides at this stage

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

1. Adults of stem borer *Stromatium barbatum* started emerging during first fortnight of June. Installation of light traps will be helpful in monitoring the initiation of emergence of stem borer adults. Run the light traps for 3 hours daily, during evening between 7.00 pm – 10.00 pm and destroy the collected beetles in water mixed with insecticide. Application of neem oil or neem seed kernel extract or hanging neem leaves inside vineyards may act as repellant for adults of *Stromatium barbatum*. If adult stem borers are noticed, application of fipronil 80 WG @ 0.06 g/litre, lambda cyhalothrin 5 CS @ 0.5 ml/litre or imidacloprid 17.8 SL @ 0.3 ml/litre water may be given directed at main stem and cordons during night. Follow the following link for detailed information on youtube video https://www.youtube.com/watch?v=Yvx7dIbPEAU
2. Chafer beetles are adults of white grubs. They start emerging after good rains during May-June months. They are active during nighttime and remain hidden during the day. After mating about 50 eggs are laid by a single female in the soil and where they feed on the roots. However, the damage to roots by their grubs in grapes is not a major problem. The major damage is caused by the adults by feeding on leaves. Mostly grape plants at the border of the vineyard are affected. Foliar application of lambda cyhalothrin 4.9 CS @ 0.5 ml per liter water at night is effective to kill the beetles.
3. Spraying of imidacloprid 17.8 SL @ 0.4 ml per litre water will help in controlling mealybug on new growth.
4. In case of thrips or caterpillar infestation, application of fipronil 80 WG @ 0.0625 g per litre or emamectin benzoate 5 SG @ 0.22 g per litre water is effective.
5. Remove excess growth to manage thrips post second pinching.
6. 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 water is effective.