WEATHER DATA FOR THE PREVAILING WEEK

Date of Fruit Pruning: 15/09/2021

Wednesday (22/09/2021)–Wednesday (29/09/2021)

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 Wed to Mon- Moderate to Good Rain.	Mostly Cloudy	12-17	72-80	96-97
Pune	20-21	28-29	Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Patas, Yavat, Supa, Narayangaon, Baramati Thu & Sun- Light Rain. Fri & Sat- Moderate to Good Rain.	Partly to Mostly Cloudy	13-19	62-67	88-91
Solapur	21-22	30-32	Solapur, Vairag, Nannaj, Kati, Pangri, Osmanabad, Latur, Ausa, Tuljapur, Pandharpur, Barshi, Atpadi, Kasegaon Wed to Mon- Good Rain.	Mostly Cloudy	13-19	56-66	88-91
Sangli	21-22	30-32	Sangli, Miraj, Palus, Kagvad, Shetfal, Palsi, Khanapur, Vita, Tasgaon, Shirguppi, Arag, Walva, Kawthe Wed- Good Rain. Thu to Sat- Moderate Rain. Sun- Light Rain.	Partly to Mostly Cloudy	15-18	58-68	94-97
Vijayapura	21	30-32	Vijayapura, Chadchan, Tikota, Telsang Wed to Mon- Good Rain.	Mostly Cloudy	17-21	56-65	88-89
Hyderabad	23	30-32	Hyderabad, Medchal, Zahirabad Wed to Tue - Good Rain.	Mostly Cloudy	12-15	64-72	89-92
Satara	20-21	27-29	Satara, Phaltan, Man, Khatav Rahata Fri- Good Rain. Thu & Sat to Tue- Light Rain.	Partly to Mostly Cloudy	10-12	68-72	94-95
Ahmednagar	21-22	28-30	Ahmednagar, Nagar, Kopargaon, Shrigonda, Karjat, Jamkhed, Akole, Rahata, Sangamner Wed to Tue- Good Rain.	Mostly Cloudy	10-16	62-76	90-93
Jalna	22-23	27-30	Jalna, , Jafrabad, Mantha, Ambad, Gansawangi Wed to Mon- Good Rain.	Mostly Cloudy	11-14	63-78	90-95
Buldhana	23	29-31	Buldana, Chikhli, D.raja, Sindkhedraja Wed to Tue- Good Rain.	Mostly Cloudy	10-18	70-83	93-96
Kolhapur	22-23	29-31	Gagan-bavada, Kagal, Karveer Thu to Tue- Light to Moderate Rain.	Mostly Cloudy	06-07	72-83	98

Bengaluru Rural	19-20	29	Bangaluru-east, Bangaluru-north, Bangaluru-south, Doddaballapur, Anekal Thu to Sun- Good Rain. Mon- Light Rain.	Partly to Mostly Cloudy	11-14	52-59	89-91
Belagavi	22-23	29-30	Belagavi, Athni, Chikodi, Gokak, Khanapur Wed to Tue- Light to Moderate Rain.	Partly to Mostly Cloudy	12-16	70-79	96-98
Bidar	21-22	29-31	Bidar, Basavakalyan, Humnabad Wed to Tue- Good Rain.	Mostly Cloudy	11-13	67-78	91-94
Bagalkot	21	27-31	Bagalkot, Bilagi, Jamkhandi, Mudhol, Hungund, Badami Thu, Fri & Sun to Tue- Good Rain. Sat- Light Rain.	Mostly Cloudy	17-23	53-68	88-90

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:** 07

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

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:** As the irrigation water requirement is low and rains expected, donot irrigate the vineyards. If no rains for more than 3days and vines are showing stress, then, apply irrigation through surface drip @ 1500 to 2000 L/acre per day.
3. 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.

4. During shoot growth stage (Fruit pruning season), apply irrigation through drip @ 3400-6800 L/ acre/ day for all grape growing regions. In case vigour is more than desired, then reduce irrigation water application by half to 1700 - 3400 L/ acre and still if growth is more, stop the irrigation till such time the growth is brought under control and then start irrigation.

Nutrient management

1. After current rains, give foliar spray of SOP @ 3-5 g/L depending upon canopy.

Pre-pruning operations – Fruit pruning season

1. In many of the grape growing areas, continuous spells of rains were received, the soils are already saturated. This must have affected the rooting activity. Due to prolonged saturation, the roots may have started decaying. Donot disturb the soil in the root zone even if pruning is being taken up. Wait for the soil to come to the wapsa condition before any soil related intervention has to be done.
2. In case pruning is planned during October, raise Sunnhemp or Dhaincha for green manuring purpose.
3. Test the soil and irrigation water, to plan for nutrient and water management during fruit pruning season.
4. 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.
5. In case of calcareous soils, if SSP is applied as basal dose, mix with FYM/compost etc. to avoid phosphorus fixation.
6. 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.

Shoot Growth stage

1. In case organic fertilizers are applied, check the C:N ratio. Lower the ratio more the nitrogen release, hence possibility of enhanced growth. Control nitrogen application based upon growth of vine.

2. Based upon the soil test value, during shoot growth stage apply urea @ 15kg / acre this week in two splits. If the soil is calcareous, instead of urea apply ammonium sulphate @ 25 kg/ acre in three splits this week. Depending upon the crop vigour, regulate nitrogen application.
3. If sodicity problem is there, apply 10 kg Sulphate of potash per acre in 2 splits this week.
4. Until and unless leaves are fully developed donot go for any foliar application of nutrients. It will be lead to wastage of spray.
5. The quantity of nutrients to be applied through foliar, depends upon canopy size.

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

Nil

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

During the last week grape vineyards are experiencing rainfall. In majority of the grape vineyard, the fruit pruning is in progress. Immediately after the fruit pruning, the vineyard the bud start sprouting. This situation comes after 8 to 9 days. During this period if the vineyard is experiencing rainfall, the gibberellins level in the vine increases resulting into reduction in the cytokinin level of the vine. Ultimately, during the bud sprouting stage, the bunch may get converted into fillage.

1. Grape growers are advised the following points
2. Do not allow to stagnate water in the root zone
3. Remove the water from field by making a small trench between rows
4. Spray cytokinin based PGR so that the level of cytokines in the vine will get increased and gibberellins level will be reduced
5. Spray 6 BA @ 10 PPM when the bud starts sprouting.
6. For effective results, the spray should be done when sprouting started
7. Application of potash as soil application and also spray will help to control the vigor

Management practices for uniform sprout

8. If the leaf fall is completely achieved, we get good result for bud sprout.
9. Application of hydrogen cyanamide is equally important as it helps in achieving early bud sprout
10. The dose of hydrogen cyanamide should depend upon diameter, temperature in the vineyard and leaf fall achieved
11. In general, 40 ml per litre water will be sufficient for cane with 8 to 10 mm diameter.
12. In case of thick canes, one more application of hydrogen cyanamide will be required with the same concentration
13. The thick canes should be twisted so that the physiological processes will initiate and uniform bud sprouting will be achieved in both the type of canes.

V. Disease management (Dr. Sujoy Saha)

Days after fruit pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
07	Low	Nil	High	Bacterial spot-High Rust- moderate

In areas of early pruning , stem and cordon wash with mancozeb 75WP @2.5-3g/l followed by sulphur@ 2.5-3g/l should be done at an interval of 3-5 days. Thiophenate methyl @1g/L may be given to protect from anthracnose disease. 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. If sprouting has started in early pruned areas spray of copper hydroxide @ 1,5-2g/l may be given for prophylactic spray against downy mildew.

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

Growth Stage: Cane maturity and afterwards stage after foundation pruning

1. High flea beetle incidence may be noticed in the vineyards now. If not controlled it will cause serious damage after fruit pruning. Remove weeds from inside and around the vineyards. Harrowing may be done in inter row space once the rainy spell is over. Give soil drenching with clothianidin 50 WDG @ 200 gram per acre in the root zone to kill flea beetle grubs in the soil. Thereafter, foliar application of lambda cyhalothrin 4.9 CS @ 200 ml per acre or imidacloprid 17.8 SL @ 160 ml per acre may be given.
2. In case of caterpillar infestation, application of fipronil 80 WG @ 0.0625 g per litre or emamectin benzoate 5 SG @ 0.22 g per litre or cyantraniliprole 10 OD @ 0.7 ml per litre water is effective. Installation of light traps outside vineyards is the best strategy to manage caterpillar population.
3. Use of broad-spectrum insecticides should be avoided for mealybug control. Buprofezin 25 SC @ 1.25 ml per litre or spirotetramat 15.31 OD @ 0.7 ml per litre 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.
4. In case of thrips infestation, remove excess shoot growth.
5. 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.
6. In new vineyards after grafting, 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 spinosad 45 SC @ 0.25 ml per litre or spinetoram 11.7 SC @ 0.3 ml per litre or fipronil 80 WG @ 0.0625 g per litre water.
7. 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.