WEATHER DATA FOR THE PREVAILING WEEK
Date of Fruit Pruning: 15/09/2021
Thursday (18/11/2021)–Wednesday (24/11/2021)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max			Min-Max	Min	Max
Nashik	19-21	29-31	Nashik, Dindori, Ozar, Vani, Loni, Pimpalgaon Baswant Shirdi,Kalwan, Palkhed Thu to Mon-Good Rain, Tue-Light Rain.	Partly to Mostly cloudy	10-20	51-67	83-90
Pune	19-20	29-31	Pune –Thu to Fri-Good Rain. Phursungi, Loni Kalbhor, Uruli Kanchan, Patas, Yavat, Narayangaon, Baramati,Supa Sun- Moderate Rain,Mon-Good Rain, Tue-Light Rain.	Partly to Mostly cloudy	10-16	54-70	81-89
Solapur	20-21	27-31	Vairag, Kati,Osmanabad, Barshi- Thu, Fri,Sun-Light Rain,Sat-Moderate Rain. Latur-Thu-Drizzling, Fri,Mon,Tue-Modertae Rain, Sat,Sun-Good Rain. Ausa, Kasegaon-Thu-Light Rain, Fri-Drizzling, Sat toWed- Good Rain. Pangri, Tuljapur, Pandharpur, Nannaj-Thu,Sun,Mon-Light Rain, Sat –Light Rain.	Partly to Mostly cloudy	09-16	59-78	90-95
Sangli	20-21	29-32	Sangli,Shetfal,Palus,Vita, Arag,Walva, Kawthe,Palsi Khanapur,Miraj, Kagvad-Fri-Light Rain,Thu to Wed-Good Rain. Tasgaon , Shirguppi.Thu-Drizzling,Fri-Moderate Rain, Sat to Wed-Good Rain.	Partly to Mostly cloudy	11-18	59-78	90-96
Vijayapura	18-20	26-31	Vijayapura,Chadchan,Tikota &Telsang Thu to Tue- Good Rain,Wed-Light Rain.	Partly to Mostly cloudy	14-20	60-88	89-95
Hyderabad	20-21	26-30	Hyderabad Fri -Moderate Rain, Sat,Sun-Good Rain, Mon to Wed- Good Rain. Medchal-Thu,Tue- Light Rain,Fri to Mon, Wed- Good Rain. Zahirabad Fri to Sun- Good Rain, Mon, Tue- Moderate Rain, Wed-Light Rain.	Partly to Mostly cloudy	10-18	53-81	88-93

Satara	19-20	27-31	Satara,Man,Khatav Rahata-Fri,Sat,Wed-Moderate Rain,Thu, Sun to Tue-Good Rain. Phaltan –Thu,Sat-Light Rain,Sun to Tue-Good Rain.	Partly to Mostly cloudy	06-11	60-73	91-94
Ahmednagar	19-21	28-31	Ahmednagar, Nagar-Sat-Light Rain,Thu,Fri, Sun,Mon-Good Rain. Kopargaon, Shrigonda, Sangamner,Karjat Thu, Fri-Light Rain,Sun, Mon-Good Rain. Jamkhed,Akole,Rahata-Fri-Moderate Rain,Sat-Light Rain,Sun-Good Rain.	Partly to Mostly cloudy	12-18	56-69	85-91
Jalna	18-20	28-31	Jalna,Ambad,Gansawangi,Mantha Thu-Light Rain,Fri,Sun-Good Rain. Jafrabad –Fri, Sat-Good Rain,Sun to Wed-Light Rain..	Partly to Mostly cloudy	10-13	47-60	78-91
Buldhana	19-21	30-32	Buldana,Chikhli, D.raja,Sindkhedraja Thu-Drizzling, Fri, Sat, Mon-Good Rain, Sun-Moderate Rain.	Partly to Mostly cloudy	10-13	53-64	76-88
Kolhapur	21-22	29-32	Gagan-bavada ,Kagal,Karveer Thu to Wed-Good Rain, Sat- Moderate Rain.	Partly to Mostly cloudy	08-12	62-79	91-96
Bengaluru Rural	19-20	25-26	Bengaluru-east, Bengaluru-north, Bengaluru-south ,Doddaballapur, Anekal – Thu to Mon – Good Rain, Sun,Tue- Moderate Rain, Wed – Drizzling.	Mostly cloudy	05-12	60-71	91-94
Belagavi	21-22	26-30	Belagavi,Gokak Thu to Tue-Good Rain, Sat-Light Rain, Wed- Moderate Rain. Athni, Chikodi, Khanapur Thu-Drizzling, Fri-Moderate Rain, Sat to Wed –Good Rain .	Partly to Mostly cloudy	07-11	70-80	95-98
Bidar	19-20	28-31	Bidar Humnabad ,Basavakalyan Thu,Sun,Wed-Light Rain, Fri,Sat,Mon-Good Rain, Tue-Moderate Rain.	Partly to Mostly cloudy	08-15	60-78	92-97
Bagalkot	19-20	24-30	Bagalkot,Hungund,Mudhol, Jamkhandi-Badami ,Bilagi Thu to Wed-Good Rain.	Partly to Mostly cloudy	11-20	56-87	87-94

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.timeanddate.com/weather/india

ICAR-National Research Centre for Grapes does not claim accuracy of it.

II. Water management (Dr. A.K. Upadhyay and Dr. Yukti Verma)

- **Days after fruit pruning: 63**
- **Expected pan evaporation: 2-4 mm**

Amount of irrigation advised:

1. Many grape growing areas are likely to receive rains from drizzling to good rains. In case rain exceeds 5 mm on a given day soil is under wapsa (field capacity) condition, donot irrigate the vineyard.
2. During shoot growth stage (fruit pruning season), apply irrigation through drip @ 3400- 6800 L/ acre/ day. Further, in case vigour is more than desired, then reduce irrigation water application to 2000 - 3000 L/ acre and still if growth is more, stop the irrigation till such time the growth is brought under control and then start irrigation.
3. Practice mulching to keep the bunds moistened. This will reduce the salinity build up in the root zone due to evaporation of the moisture from the surface of the bund.
4. From flowering to fruit setting, apply irrigation through drip upto 2500 L/ acre/ day. Vigour needs to be controlled.
5. During Berry development stage, apply irrigation through drip @ 3400- 6800 L/ acre/ day for all grape growing regions.

Nutrient management

1. Due to continuous sprays the leaf will not look healthy, need based sprays should be followed as the leaf health is bound to affect the photosynthate formation. This will impact bunch development.

Shoot Growth stage

1. If sodicity problem is there, apply 10 kg Sulphate of potash per acre in 2 splits this week.
2. The quantity of nutrients to be applied through foliar, depends upon canopy size.
3. If the crop is between 5 leaf to prebloom stage, apply Zinc sulphate and Ferrous sulphate @ 15 kg/ acre based upon soil test value. Boron application should be carried out only if soil test value indicates low levels and the irrigation water does not contain boron. If during foundation puning, the petiole test stated that boron was deficient then apply boron @ 1.5 kg to 5 kg depending upon the soil test value. Apply one kg boron at a time.
4. Apply 15 kg Magnesium sulphate per acre in two splits.
5. If soils are calcareous, spray Sulphate of potash and Magnesium sulphate @ 2-3g/L depending upon leaf age during prebloom stage.

Flowering to setting stage:

1. Donot apply any nitrogen based fertilizer just before Flowering to Setting stage to avoid problems of kooj (inflorescence necrosis).
2. Apply 3-4 kg Phosphoric acid in two to three splits this week. Remember that the pH of the irrigation water should be near 6.0. OR apply SSP @ 125kg/acre as basal application. SSP should be mixed with FYM/Compost before application to minimize phosphorus fixation.
3. If SOP not applied, then apply 15 kg SOP in case low temperature and cloudy conditions forecasted during flowering stage.
4. **Petiole nutrient testing: At 70% capfall stage, petiole samples should be taken for nutrient analysis. The leaf opposite the bunch should be removed for sampling.**

Berry Development stage:

1. After Berry setting, continue initially with Phosphoric acid application @ 2 kg followed by 5 kg 12-61-0/acre.
2. If the berry size is from 2-4mm, spray calcium @ 2g Calcium Chloride or 0.5 g Ca chelate per litre. Target sprays immediately after GA application (preferably next day) for better absorption.

3. If the berry size is from 5-8mm, spray calcium & 2g Calcium Chloride or 0.5 g Ca chelate per litre. Target sprays immediately after GA application (preferably next day) for better absorption.
4. After 8-10 mm berry size, start application of nitrogen in the form of ammonium sulphate @ 25kg /acre in 4 splits in calcareous soil and as urea @ 15 kg/acre in other soils in 3 splits. Follow this up with Sulphate of potash or 0-0-50 @ 25 kg/ acre in 3-4 splits for next two weeks.

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

Nil

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

Due to cloudy weather, the grape vineyard are experiencing the drop and inflorescence rot problem. Following possible management practices are suggested that may help to control.

1) Due to high R.H. and rainfall, shoot vigor will start increasing. Hence, pinching of shoot to be given priority.

2) In case of high vigor, nitrate level in the vine may also be increased. Hence, application of potash through spray and soil will help to control the vigor.

3) Open canopy will be the top priority in cloudy condition. Hence, removal of side shoots and basal 2-3 leaf will make open canopy. Under such canopy, aeration will be sufficient thereby reducing the chances of downy mildew incidence.

4) In majority of the grape vineyards, flower drop is experienced. This is mainly due to dense canopy creating the atmosphere of suffocation. Shoot pinching should help to control the drop. In severe cases, either girdling or making a small wound on cordon or trunk may also be helpful for controlling this problem.

V. Disease management (Dr. Sujoy Saha)

Days after fruit pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
63	High	Moderate	Low to moderate	Bacterial spot-Low

As there is cloudy weather prevailing in most of the areas, application of Dimethomorph@1g/L+mancozeb 75WP@2g/L or Iprovalicarb+propineb @ 2.25g/L or Mandipropamid@ 0.8g/L may be done for downy mildew control. Two applications of Amisulbrom 17.7% SC @375ml/ha at 10-days interval will give a good control of downy mildew. Light to moderate drizzles are expected in all grape growing areas. Foliar spray of Trichoderma may also be given @2-3ml/L but it should not be given immediately after application of copper fungicides. Trichoderma through drip should be continued. One spray of Ampelomyces quisqualis @5g/l may also be given when high humidity is prevailing for the control of powdery mildew. Preventive spray of sulphur @ 2-3g/l will also give a protection against powdery mildew at this stage.

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

Growth Stage: pre flowering to berry setting after fruit pruning

- Caterpillar (*Spodoptera litura*) or flea beetle infestation may increase in most of the grape areas as humidity is high. Caterpillars may chew on buds and new sprouts. For the

management of caterpillars and flea beetle fipronil 80 WG @ 0.06 g/litre (not to be used during and after pre-flowering and flowering stages) water may be given during night.

- If the crop is nearing pre flowering, flowering and berry setting stages, application of spinosad 45 SC @ 100 ml per acre or spinetoram 11.7 SC @120 ml per acre preferably at night is effective against flea beetle and thrips.
- Jassid incidence may be seen at some places, spraying of lambda cyhalothrin 4.9 CS @ 0.5 ml per litre or imidacloprid 17.8 SL @ 0.4 ml per litre water at night is effective.
- At 15 days interval, plant wash with entomopathogenic fungi viz. *Metarhizium, Beauveria* and *Lecanicillium* may be useful for controlling mealybugs and ants.
- Do not spray any broad spectrum insecticides such as chlorpyrifos, dichlorvos, methomyl, profenophos, etc. for mealybug control. Higher humidity will favour development of natural enemies which will slowly kill mealybugs. In case chemical spray is required, prefer buprofezin 25 SC @ 1.25 + *Metarhizium anisopliae* 3 ml per litre of water for plant wash.
- Incidences of new species of stem borer (red colour larva) may be noticed under bark in Sangali, Solapur, Nashik, Pune, Bijapur grape areas. Remove the loose bark and give good plant wash mainly targeting cordons and main trunk with broad spectrum insecticides, for example, lambda cyhalothrin 5 CS @ 2.5 ml/l.