WEATHER DATA FOR THE PREVAILING WEEK

(Assumption: Fruit Pruning date- 15/09/2019)

I. WEATHER DATA FOR THE PREVAILING WEEK

Wednesday (26/12/2019) – Thursday (2/1/2020)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min-Max	R H%	
	Min	Max				Min	Max
Nashik	13-16	27-28	**Nashik, Pimpalgaon Baswant, Ojhar, Palkhed, Dindori, Vani** Thu- Drizzling. **Shirdi, Loni, Niphad, Kalvan, Devla** Sun- Drizzling.	Clear to Partly Cloudy	01-19	33-44	63-92
Pune	15-19	28-29	**Pune** Thu & Sat- Drizzling. **Phursungi, Narayangaon, Junnar** Thu- Drizzling **Loni Kalbhor, Uruli Kanchan, Yavat, Patas, Supa, Baramati** Thu & Sat to Mon- Drizzling.	Clear to Partly Cloudy	01-17	39-61	77-93
Solapur	17-21	29-30	**Solapur** Thu- Moderate Rain. **Nanaj, Kati** Thu- Light Rain. Fri & Mon- Drizzling. **Pangri** Thu- Light Rain. Fri to Mon- Drizzling. **Barsi** Thu to Mon- Drizzling. **Pandharpur** Thu- Moderate Rain. Fri & Mon- Drizzling. **Kasegaon** Thu & Sun- Drizzling. **Vairag** Thu to Mon- Drizzling. **Osmanabad, Tuljapur, Latur, Ausa** Thu & Sun to Wed- Drizzling. Fri- Light Rain.	Clear to Mostly Cloudy	06-20	39-53	62-86

			Atpadi Thu- Light Rain. Sun- Drizzling.				
Sangli	17-21	29-31	**Sangli, Miraj, Arag, Tasgaon, Vite** Thu- Light Rain. Sun- Drizzling. **Shirguppi, Kagvad, Kavtha Mahankal** Thu- Moderate Rain. Sun- Drizzling. **Palsi** Thu, Sat & Sun- Drizzling. **Palus, Valva** Thu & Sun- Drizzling. **Shetfal** Thu- Light Rain. Mon- Drizzling. **Khanapur** Thu- Moderate Rain. Mon- Light Rain. Tue to Next Thu- Drizzling.	Clear to Partly Cloudy	03-18	40-48	76-91
Bijapur	18-21	28-31	**Bijapur, Tikota, Telsang** Thu- Moderate Rain. **Chadchan** Thu- Good Rain.	Clear to Partly Cloudy	05-19	40-51	74-84
Hyderabad	15-20	27-29	**Hyderabad, Medchal, Zahirabad** Fri to Next Thu - Drizzling.	Partly Cloudy to AM Showers	05-18	56-71	78-100

Note: Above weather information is summary of weather forecasting given in following websites

http://www.imd.gov.in/, http://wxmaps.org/pix/prec6.html, http://www.fallingrain.com/world/IN/, http://www.wunderground.com/, http://www.bbcweather.com-weather/1269750, etc.

II. a) Days after pruning: 102

b) Expected growth stage of the crop: Berry softening

III) Nutrient and Irrigation Management (Dr. A K Upadhyay)

Expected pan evaporation: 3.5-4 mm

Amount of irrigation advised:

1. During Flowering to setting stage, apply irrigation through drip @ 2,500 to 3,400L/ acre/ day.

2. During Berry development stage, apply irrigation through drip @ @ 5,950- 6,800L/ acre/ day. Further, in case vigour is more than desired, then reduce irrigation water application by half to 2,500 – 3,400 L/ acre. Still if you are not able to control the vigour, stop irrigation till such time growth is controlled.
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. In case it rains, do not give irrigation, if soil is at field capacity(waapsa)

IV. Soil and Nutrient management

1. Inflorescence necrosis could be a issue in dense canopy. Remove side shoots and reduce canopy to allow penetration of the sunlight for proper aeration. Manage canopy for adequate sunlight and air movement within the canopy for avoiding/ minimizing problems of kooj (inflorescence necrosis).
2. Donot apply any nitrogen based fertilizer just before Flowering to Setting stage to avoid problems of kooj (inflorescence necrosis).
3. If SOP not applied, then apply 15 kg SOP and follow it up with SOP spray for building up the potassium levels in the vines. This will be especially beneficial during low temperature and rainy conditions.

Flowering to setting stage:

1. 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.
2. Go for petiole sampling at Full bloom stage (2/3rd Cap fall stage). The petiole sampled should be opposite the bunch.

Berry Development stage:

1. After Berry setting, continue initially with Phosphoric acid application @ 5 kg in two splits this week till 8 mm berry size.
2. After berry setting till 8mm berry size, 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. In the calcareous soil, spray magnesium sulphate @ 3g/L on the vines followed by fertigation of magnesium sulphate @ 10kg/acre from setting till 6-8 mm berry stage.
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.

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

NA

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

During coming week, the minimum temperature is expected to reduce. This may hamper physiological processes. The vineyard at different growth stages need to be attended for the following.

1) ***Grafted vines***: In this vineyard, the grafted plants will not impart vigor and the growth will stop due to low temperature. However, the cane maturity will be an issue. The grafted plants need to be taken fresh re-cut at 4-5 buds above the graft joint. While performing this operation, the canes/shoots should be matured. To achieve the shoot maturity, application of 0:0:50 @ 4-5g per lit water (2-3 times) as spray can be given. In addition, if the roots are active, soil application with same fertilizer @ 5kg/acre can be done.
2) ***Old vineyard***: In the vineyard where berry setting is completed and the weather is cloudy with reduced temperature, the incidence of powdery mildew will be more. Removal of excess shoots and training the shoots on wire will support the effective coverage of fungicide sprayed for the control of disease.

Berry thinning needs to be given priority. This will help to achieve quality berries required for the export. Root activity need to be checked from time to time since the reduced temperature will hamper the physiological activity thereby affecting the berry growth.

VI. Disease management (Dr. Sujoy Saha)

Days after pruning	**Risk of diseases**			
	Downy mildew	**Powdery mildew**	**Anthracnose**	**Others (specify)**
102	Low	Moderate	Nil	Nil

Application of Hexaconazole @1ml/L or Difenoconazole@ 0.5ml/L or tetraconazole @ 0.75 ml /Lor Metrafenone 50% SC @0.25ml/L should be applied if the crop is less than 60 days old for the control of powdery mildew. If the crop is more than 60 days, application of sulphur @2g/l+chitosan @2ml/l as a tank mix may be given which will take care of powdery mildew and untimely berry cracking if any, respectively. Chitosan will also prevent downy mildew attack. After application of sulphur, if the crop is in advanced stage (more than 90 days), application of calcium nitrate/chloride @1-2g/l may be done. Calcium will further strength the wall and prevent berry cracking. Just before veraison stage, sulphur @ 2g/l + calcium chloride @1-2g/l may be applied followed by chitosan @2g/l. Regular application of *Ampelomyces quisqualis* should be done @5-6g/L at regular intervals for control of powdery mildew.

VII. Insect and Mite Pest Management (Dr. D.S. Yadav)

- Caterpillars have started damaging bunches in most of the grape areas where humidity is high. The most effective way to control them is to collect and kill them by hand as insecticides may not reach inside the bunch. The caterpillars on leaves are also needs to be killed as they can go inside the bunch later on. Spraying of emamectin benzoate 5 SG @ 0.22 gram per litre water (pre harvest interval 25 days) at night is effective to manage them.
- Entomogenous fungus such as *Metarhizium, Beauveria* and *Lecanicillium* can be used for plant wash at 15 days interval to reduce mealybug populations. If, insecticide application seems inevitable, the only buprofezin 25 SC @ 1.25 ml/L water may be used for management of mealybugs as this insecticide does not harm beneficial organisms in the vineyard.
- Sulphur 80 WDG @ 1.5-2.0 g/L water may be applied if mite infestation is observed.