

## WEATHER DATA FOR THE PREVAILING WEEK

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

### I. WEATHER DATA FOR THE PREVAILING WEEK

Thursday (23/1/2020) – Thursday (30/1/2020)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min- Max	R H%	
	Min	Max				Min	Max
Nashik	11-17	26-33	Nashik, Pimpalgaon Baswant, Ojhar, Palkhed, Dindori, Vani Tue- Drizzling.	Clear	0-15	19-36	52-90
Pune	13-18	28-34	Narayangaon, Junnar Tue- Drizzling.	Clear	0-14	20-35	55-88
Solapur	19	32-35	No Rain.	Clear	3-13	21-30	51-71
Sangli	16-18	31-34	No Rain.	Clear	1-15	22-33	62-84
Bijapur	18-20	31-34	No Rain.	Clear to Partly Cloudy	4-17	21-29	49-77
Hyderabad	18-19	31-34	Hyderabad Next Thu- Drizzling.	Clear	2-11	33-41	72-93

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: 130

### b) Expected growth stage of the crop: Berry softening

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

Expected pan evaporation: 4.5 to 6 mm

#### Amount of irrigation advised:

1. From Berry development stage onwards till maturity, apply irrigation through drip @ 7,600-10,200 L/ acre/ day.
2. Remember that if the soil is at field capacity (wapsa) then donot irrigate.
3. Flooding the vineyard is not advised as it will lead to wastage of water. Concentrate irrigation water application in the root zone only.

4. In case berry cracking is observed withhold irrigation water application for few days. Remove the cracked berries and check whether the soil is at field capacity (wapsa) or not. If below field capacity (wapsa) start irrigation water application.
5. 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.

#### **Berry Development stage:**

1. Apply Sulphate of potash or 0-0-50 @ 25 kg/ acre in 3-4 splits for next two weeks. Total potassium application (SOP) should be approx. 60 kg/acre during this stage.
2. In calcareous soil, apply zinc sulphate @ 10 kg/acre along with Ferrous sulphate @ 10kg/ acre after 8-10 mm berry size and before Veraison initiation.
3. Spray once Magnesium sulphate and potassium sulphate @ 3g/L in calcareous soil during this stage.
4. Apply Magnesium sulphate @10kg/acre in two splits

#### **Ripening to Harvest stage:**

1. Apply Sulphate of potash or 0-0-50 @ 25 kg/ acre in 3-4 splits for next two weeks. Total potassium application (SOP) should be approx. 60 kg/acre during this stage. Follow this up with Magnesium sulphate @ 10 kg/acre in two splits. Spray Magnesium sulphate in calcareous soil.
2. Spray Magnesium sulphate and potassium sulphate @ 3g/L in calcareous soil.

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

NA

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

During the last week the differences in minimum and maximum temperature was experienced in the grape vineyard. At present, in majority of the vineyard has 14-16mm berry development stage. When the minimum temperature falls below 7 to 8°C, the pink pigment of green berries gets converted into pink. It is called physiological disorder. The pink berry formation in grape vineyard do not fetch good price. To control the pink colour formation, following practices are to be followed.

- a) Covering the grape bunches with newspaper.
- b) Increasing the irrigation in the vineyard
- c) Burning the fire in different places in the vineyard to increase the temperature
- d) Covering the vineyard with shade net

Before covering bunches the care should be taken for controlling the bunch from powdery mildew and mealy bug infestation.

During this period, the physiological processes hamper/ slow down. This is directly affecting the berry development. Under such situation, the growers tend to spray growth regulators. This results into thickening of berry skin, delay in sugar formation and also harvest. The adverse effect of this may be seen as reduced fruit bud differentiation in the next season. To avoid this following practices are to be followed.

- a) Loosening the soil on the bund. This will help to activate the roots.

- b) Increasing the irrigation so as to reach the water in between the rows. This will help to activate the roots other than the active zone.
- c) Apply the phosphorus based fertilizer with phosphorous solubilising bacteria. This will help for easy uptake of nutrient required for berry development.
- d) Use mulching on the bund. This will help to increase the temperature in the root zone.

## VI. Disease management (Dr. Sujoy Saha)

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

Application of Hexaconazole @1ml/L or Difenoconazole@ 0.5ml/L or tetraconazole @ 0.75 ml /L or 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 may be done if there is a moderate incidence of powdery mildew. Prior to paper wrapping, an application of *Ampelomyces quisqualis* @5-6g/L or *Bacillus subtilis* @2g/L or Trichoderma formulations @ 4-5g/L may be given to the bunches for control powdery mildew. If there is a possibility of rain, chitosan@2g/L may be applied prior to paper wrapping

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

Days after pruning	Risk of pests			
	Mealybug	Mite	Thrips/leafhopper	Caterpillar
130	High	High	Low	Moderate to High

- Bunch-weber may be seen infesting bunches at some places. It is a minor pest so far. The most effective way to control them is to collect and kill them by hand as insecticides may not come into contact with it. 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 (PHI 65 days) 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 or Abamectin 1.9 EC @ 0.75 ml/L (PHI 25 days) or Bifenazate 22.6 SC @ 0.5 ml/L (PHI 25 days) water may be applied if mite infestation is observed.