# WEATHER DATA FOR THE PREVAILING WEEK

(Assumption: Foundation Pruning date- 15/04/2019)

# I. WEATHER DATA FOR THE PREVAILING WEEK

Thursday (17/07/2017)							
Location	Tempera	ature		Cloud	Wind	RH%	
	(°C)		Possibility of Rain	Cover	Speed		
	Min	Max			(Km/hr)	Min	Mox
	IVIIII				Min-	191111	IVIAX
					Max		
Nashik	21-22	27-28	Nashik, Ojhar, Pimpalgaon	Partly	03-14	72-83	98-99
			Baswant, Palkhed, Dindori, Vani,	to			
			Kalwan, Devla, Niphad, Satana,	Mostly			
			Shirdi, Loni	alandar			
			Thu- Fri & Wed- Next Thu Good	cloudy			
			Rain				
			Sat - Tue Moderate Rain				
	21.22	27.20			00.10	67.04	07.00
Pune	21-22	27-29	Pune, Phursungi, Narayangaon,	Partly	02-19	67-84	97-98
			Junnar	to			
			Thu- Next Thu Moderate to Good rain	Mostly			
				cloudy			
			Loni Kalbhor Uruli Kanchan				
			Yavat, Patas, Supa, Baramati				
			Thu & Tue- Next Thu Good Rain				
			Fri-Mon Light to Moderate Rain				
Solapur	22-23	28-31	Solapur, Nanaj, Kati, Vairag,	Partly	04-14	64-81	94-96
			Barshi, Pangri, Latur, Ausa,	cloudy			
			Thu-Sat & Tue Good Rain				
			Sun-Mon & Wed – Next Thu				
			Drizzling to Light Rain				
			Osmanabad, Tuljapur				
			Thu Good Rain, Fri to Next Thu				
			Light to Moderate Rain				
			Pandharpur, Kasegaon Tue Good				
			Rain,other day				
			Drizzling to Light Rain				
			Atpadi Thu- Next Thu Light to				
			Moderate rain				

### Thursday (19/09/2019) – Thursday (26/09/2019)

Sangli	21-22	27-29	Sangli, Miraj, Shirguppi,	Partly	04-20	68-81	97-98
			Kagwad,Arag,Tasgaon, Palus, Valva , Kavthe Mahankal	Cloudy			
			Thu- Next Thu Light to Moderate rain				
			Shetfal, Vita, Palsi Tue Good Rain,other day Drizzling to Light Rain				
			Khanapur- Thu- Next Thu Good rain				
Bijapur	23	27-31	Bijapur,Tikota,Telsang,ChadchanTue Good Rain,other dayDrizzling to Light Rain	Partly Cloudy	00-08	74-85	99- 100
Hyderabad	22-23	29-30	<b>Hyderabad, Medchal, Zahirabad</b> Thu- Next Thu Good Rain	Mostly cloudy	00-12	73-81	97- 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: 159

### b) Expected growth stage of the crop: - Cane maturity stage and afterwards

Expected pan evaporation: 3 mm

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

Expected pan evaporation: Nil - 3 mm

### Amount of irrigation advised:

- 1. Grape growing areas are likely to receive from light to good 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 irrigate the vineyard.
- 2. Most of the vineyards have already crossed cane maturity stage. The irrigation water application should be such as to avoid new shoot growth as this may lead to development of disease and pests. Emphasis should be to maintain existing leaf in healthy condition and avoid leaf fall till it is desired.
- 3. In areas of Pune dist. viz. Indapur and Bori, Solapur, Sangli and Bijapur the ground water used for irrigation contains more salt and less and poor quality irrigation water was used during Foundation

pruning season, remove the mulch and allow the bund/ rootzone to be fully wet with water received from rains for leaching of salts for subsequent fruit pruning.

4. In areas of Pune dist. viz. Indapur and Bori, Solapur, Sangli and Bijapur where less rainfall was received, poor quality water was used and the quantity of available water is less, it is advised 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. During shoot growth stage, if required, apply irrigation through drip @ 4200 L/ acre/ day for all grape growing regions.
- 2. In case vigour is more than desired, then reduce irrigation water application by half to 2100 2800 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.

## Nutrient management:

- 1. After Cane maturity stage, check for the sodicity problems. Soil, petiole and water reports will give information on extent of buildup of sodicity in soil. Apply gypsum to the soil for removal of sodium from the soil exchange complex. In case of calcareous soils, use sulphur for similar purpose. Gypsum/sulphur should be properly mixed in soil. The soil should be moist. After approx. 20 days adequate irrigation should be provided to leach sodium from the soil.
- 2. Due to continuous rains earlier and also improper potassium management, the canes may not be mature. It is advised to spray SOP @ 5g/L twice followed by 15-20 kg SOP/acre through drip in two splits.
- 3. If soils are calcareous in nature, then apply 50 kg sulphur between the vines in the soil. The sulphur should be properly mixed in the soil for improving its efficacy in taking care of calcium carbonates. The efficacy of sulphur is improved if FYM/ Compost are applied along with sulphur and mixed in the soil.
- 4. Remove mulch applied during Foundation pruning and loosen the soil for improving movement of water through the root zone to reduce salts accumulated in the root zone. Organic mulch can be mixed in the soil to improve the porosity of the soil.

### **Pre-pruning operations – Fruit pruning season:**

- 1. In many of the grape growing areas in Nasik, Sangli and other areas, continuous spells of rains were received, the soils are already saturated. This has affected the rooting activity. Due to prolonged saturation, the roots may have started decaying. Do not 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. 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.

- 4. In case in calcareous soils, if SSP is applied as basal dose, mix with FYM/compost etc. to avoid phosphorus fixation.
- 5. Test the soil and irrigation water, to plan for nutrient and water management during fruit pruning season.

### Fruit pruning season:

- 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.

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

NIL

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

Considering the growth stage and weather, the growers are advised for the following.

### **Problems in graft success:**

In majority of the grape growing region, for establishment of new grape vineyard, the grafting of new variety is in progress. However, the growers are facing some problems for graft success. The condition for grafting should be as below.

### **Rootstock:**

i) The shoots of the rootstock selected for grafting should be straight growing, healthy and disease free.

ii) At the time of grafting, the shoots should be in sap flow condition.

iii) The thickness of shoot at grafting positing should be about 7-8mm.

iv) The shoots should be either semi-matured or immature.

### Scion:

- i) The scion selected for grafting should be completely matured with dark brown color of the pith
- ii) The scion shoots should be of same thickness to that of rootstock
- iii) The scion shoot should be round in shape with sufficient stored food material
- iv) The scion shoot selected should be from high yielding vine with resistance to the pest and diseases
- v) The intermodal length of the scion should be 5.0 to 5.5cm

### **Condition required during grafting:**

- a) The temperature in the vineyard should be around 35°C and relative humidity above 80%
- b) The grafting person should have good skill

#### **Precautions to be taken:**

- i) To maintain sap flow condition of rootstock shoot, irrigate the plot 3-4 days before the grafting
- ii) Dip the basal portion of scion in 15-20ppm 6-BA solution
- iii) Dip the cuttings in Carbendazim @ 3-4 g/L water to avoid further infection
- iv) Apply urea @ 2-3 kg/acre for successful grafts

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

Days after pruning	Risk of diseases						
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)			
159	MODERATE	LOW	HIGH	Bacterial leaf spot Rust			

For downy mildew control application of potassium salt of phosphoric acid @4g/l + Mancozeb @2g/L may be done. Mancozeb will also give an additional protection against bacterial leaf spot disease. In regions where cloudy conditions are prevailing, but with high humidity, foliar application of Bacillus sp 2g/L or Trichoderma sp @ 4-5g/L may be done. Care should be taken not to apply biocontrol agents where copper formulations are applied.

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

### Cane maturity and afterwards stage after foundation pruning

- Spraying of emamectin benzoate 5 SG @ 0.22 gram per litre water or fipronil 80 WG @ 0.06 gram per litre water is effective to manage caterpillars.
- Remove excess shoot to manage thrips populations.
- Vineyards may have higher mealybug infestation as well. However, increase in relative humidity will favour build-up of natural enemies and natural biological control of mealybugs. Therefore, avoid spraying broad spectrum insecticides. Use of insecticides for mealybug control should be avoided. 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.
- Mite infestation may be observed on old leaves at some places. Spraying of sulphur 80 WDG @ 2.0 gram per litre water is effective to manage mites.