

WEATHER DATA FOR THE PREVAILING WEEK

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

I. WEATHER DATA FOR THE PREVAILING WEEK

Thursday (05/12/2019) – Thursday (12/12/2019)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min- Max	R H%	
	Min	Max				Min	Max
Nashik	16-19	29-31	Vani Thu- Drizzling.	Clear to Mostly Cloudy	02-18	34-44	70-83
Pune	17-19	29-31	Phursungi, Narayangaon, Junnar Thu- Light Rain. Loni Kalbhor, Uruli Kanchan, Yavat, Patas, Supa, Baramati Thu & Next Thu- Drizzling.	Clear to Mostly Cloudy	01-19	38-50	70-81
Solapur	18-21	30-31	-	Clear to Partly Cloudy	08-16	38-47	76-88
Sangli	18-20	30-31	Sangli, Arag, Kagwad, Miraj, Shirguppi, Palsi Sun- Drizzling Shetfal Thu- Drizzling	Clear to Partly Cloudy	03-21	42-49	78-91
Bijapur	18-20	29-30	Bijapur, Tikota, Telsang Sun & Mon- Drizzling.	Clear to Partly Cloudy	07-22	40-49	81-93
Hyderabad	16-19	27-29	Hyderabad, Zahirabad, Medchal Sun, Mon & Next Thu- Drizzling.	Clear to Partly Cloudy	04-12	51-65	91-100

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: 81

b) Expected growth stage of the crop: - :

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

Expected pan evaporation: 4-5 mm

Amount of irrigation advised (Dr. A.K. Upadhyay):

1. During shoot growth stage, apply irrigation through drip @ 5,950- 6,800 L/ acre/ day. Further, in case vigour is more than desired, then reduce irrigation water application by half to 2,100 – 3,400 L/ acre. Still if you are not able to control the vigour, stop irrigation till such time growth is controlled.
2. During Flowering to setting stage, apply irrigation through drip @ 3,000 to 2,500L/ acre/ day.
3. 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 2,100 – 3,400 L/ acre. Still if you are not able to control the vigour, stop irrigation till such time growth is controlled.
4. 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.

IV. Soil and Nutrient management (Dr. A.K. Upadhyay)

Shoot growth stage:

1. Apply 10 kg Magnesium sulphate per acre if the crop is between 5 leaf to prebloom stage.
2. If sodicity problem is there, apply 10 kg Sulphate of potash per acre in 2 splits this week.
3. If soils are calcareous, spray Sulphate of potash and Magnesium sulphate @ 2-3g/L depending upon leaf age during prebloom stage.
4. Do not apply any nitrogen based fertilizer just before flowering to setting stage to avoid problems of kooj (inflorescence necrosis). Manage canopy for adequate sunlight and air movement within the canopy for avoiding/ minimizing problems of kooj (inflorescence necrosis).
5. If SOP not applied, then apply 15 kg SOP in case low temperature and cloudy conditions forecasted during flowering stage.

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. 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. 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.
5. 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)

This week also there is a chance of rain hence, GA and CPPU application should be simultaneous with fungicide application. If the above mentioned application is completed earlier then calcium application may be done.

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

Management of new vineyard

During the last week, there was rainfall in majority of the grape growing region or cloudy weather. This has resulted into dew formation on leaf during morning hours. In the grafted garden, there are two major problems-

1) Downy mildew incidence –

Due to fog/dew formation, the leaf wetness during morning hours was continued for more time (even upto 11 a.m.). This has resulted into activation of downy mildew disease. In severe cases, the earlier downy mildew infestation was increased resulting into blackening of grafted shoot just above graft joint. Under such condition, the grafts are to be cut / remove just 3 – 4 buds before graft joint. Since temperature at present is favourable for short growth, on new growth grafting can be performed during Feb (at the time of re-cut) and using the scion from the same plot.

2) Shoot maturity –

In other case, due to rains and increased relative humidity is helping the shoots to grow at faster rate. In the same garden all the grafted plants did not attain a proper height. Hence, re-cut of the grafted plants is recommended during Feb first week. This re-cut is taken 4-5 buds above the graft joint. At the time of re-cut, this shoot should have at least 6-8 matured buds above graft joint. Hence, at this stage, it is advised to apply SOP or 0:0:50 @ 8-10 kg/acre through soil. In addition, spray of 0:0:50 @3-4g/lit (3-4 sprays) be given. The pinching of grafting tip will also help to control the growth.

VI. Disease management (Dr. Sujoy Saha)

Days after pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
81	Low	Low to moderate	Nil	Nil

As the temperature is going down, the risk of downy mildew will decrease. However, the infected portions may be pruned and discarded. There is absolutely no need for panic spray of fungicides. 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. For powdery mildew control application of sulphur@2-2.5g/l may be done.

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

- Thrips and caterpillar population may be high in most of the grape growing areas. The vineyards in berry setting and early berry development are most susceptible for thrips damage. Spraying of emamectin benzoate 5 SG @ 0.22 gram per litre water or cyantraniliprole 10 OD @ 0.7 ml per litre water is effective to manage thrips and caterpillar both.
- 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, then 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.