

WEATHER DATA FOR THE PREVAILING WEEK

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

I. WEATHER DATA FOR THE PREVAILING WEEK

Wednesday (11/07/2019) – Wednesday (18/07/2019)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nashik	22-23	26-28	Nashik, Ojhar, Pimpalgaon Baswant, Palkhed, Dindori, Vani, Satana Thu to Fri Moderate Rain & Sat onward Good Rain Kalwan, Devla, Niphad, Shirdi, Loni Thu-Thu Moderate Rain	Cloudy	11-17	78-84	90-93
Pune	22-23	26-28	Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Yavat, Patas, Supa Thu to Fri Light Rain & Sat onward Good Rain Baramati, Narayangaon, Junnar Thu to Sat Moderate Rain & Sun onward Good Rain	Cloudy	15-28	73-84	89-93
Solapur	22	27-29	Solapur, Nanaj, Kati, Vairag, Barshi, Pandharpur, , Latur, Ausa, Pangri, Osmanabad, Tuljapur Thu- Thu Light Rain Atpadi Thu to Sat Light Rain, Sun onward Good Rain	Cloudy	07-13	63-77	90-93
Sangli	23	27-28	Sangli, Miraj, Arag, Shirguppi, Kagwad, Walva, Tasgaon, Palus, Kavathe Mahankaal, Vita Sat onward Good Rain Khanapur, Palsi Thu- Thu Good Rain Shetfal Thu- Thu Light Rain	Cloudy	07-17	63-87	88-90

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: 89

b) **Expected growth stage of the crop:** - Subcane development to initiation of cane maturity

Expected pan evaporation: 3-5 mm

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

Amount of irrigation advised:

1. In general, there will not be any need to provide irrigation in areas which have witnessed continuous rains since last 3-4 days.
2. 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, do not apply irrigation.
3. If continuous good rains are forecasted, remove the mulch and allow the bund/ rootzone to be fully wet with water for leaching of salts. This is especially important for the following conditions:
 - i) In Solapur, Sangli and Bijapur where the ground water used for irrigation contains more salt.
 - ii) Early pruning is planned either in July or August.
4. The vines are at **Cane maturity and Fruit Development** stage. Provide irrigation through drip @ 2000 - 3000 litre/ha/day in case no rains are received.

NUTRIENT MANAGEMENT:

Cane maturity and Fruit bud development stage:

1. Potassium application is required from Cane maturity stage onwards. Approx. 64 kg of sulphate of potash (soluble grade) should be applied in this stage. Split the application into at least five doses to reduce the leaching losses of the potassium. Apply 15 kg SOP in two – three splits during this week.
2. The rains have started. 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.
3. In case of calcareous soils where acute iron deficiency is observed, repeatedly spray 2-3g/L Ferrous sulphate two to three times at 4-5 days interval followed by 15-20 kg/ acre Ferrous sulphate application through drip. The fertigation dose should be split into at least 3 doses of 5kg each.

NOTE:

In some vineyards, problem of yellowing of the leaves in the margin along with vein reddening is observed. This is due to potassium deficiency. The deficiency of potassium can be due to insufficient potassium application or calcareous soils affecting the potassium uptake. It could also be due to sodicity problem in the vineyard. This deficiency can lead to more powdery mildew infestation and sucking pest (leaf hopper) incidence.

Under such situation, Potassium deficiency can be corrected by a combination of foliar spray (minimum three to four) of 0.5% sulphate of potassium (5g/litre SOP) and soil application of potassium fertilizers. In sunny days the spraying should be done in morning or evening when

humidity is high and temperature is low. Spraying during day time when temperature is high and humidity is low reduces potassium uptake into the leaves. Apply 25 to 50 kg SOP /acre as single dose or via fertigation (in 3 to 4 splits) within one week, depending upon extent/severity of potassium deficiency.

However, for any measures to succeed, calcareous or sodicity conditions should be managed, then only appreciable effect of potassium application can be observed.

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

As it is raining every day, hence it is necessary to drain out the water from vineyards. Do not carry out the weeding during rainy days.

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

The maximum temperature in the grape growing areas has lowered down to about 28°C and the relative humidity is increased to about 90%. The change in weather will have positive as well as negative effects on vine growth. Considering the present situation, the growers are advised for the following.

Rootstock planting:

- i) During this period, the rootstock plants will impart more vigour thereby increasing the shoot length. This will result into lanky shoots. Hence, pinch the growing tip after three feet height. This will help in increasing the shoot diameter required for grafting.
- ii) Remove the side shoots in the instalments of 3-4 at a time. This will help in achieving 8-10mm diameter of shoot.
- iii) Tie the shoots to the bamboo with the help of sutali.
- iv) On old leaf of rootstock plant may suffer with the infection of rust. Hence, spraying of blue copper @ 2.0g/L or Flusilazole @ 0.50 to 0.75 ml/L will be helpful
- v) Select 3-4 straight growing, healthy and disease free shoots for grafting a suitable variety.

New vineyard:

- i) The weather condition is favorable for increasing the growth. Hence, make another instalment of cordon. This will help to develop 3-4 new fruitful canes.
- ii) Allow the last growing shoot on a cordon and tie on the wire with sutali.
- iii) Apply only phosphorous based fertilizers to initiate fruit bud differentiation on new growth.
- iv) Spray 6 BA and Uracil for fruit bud differentiation.
- v) Apply potash @ 4-5kg/acre basis so as to arrest the vegetative growth and encourage cane maturity.
- vi) The incidence of downy mildew may be more during this week. Hence, removal of side shoots, pinching the growing shoot tip, removal of 2-3 basal leaf, etc. will help to control the disease.

Old vineyard:

- i) Shoot pinching at regular interval will help to advance the cane maturity. This will also help to control anthracnose.
- ii) Spray potash @ 4-5g/L water depending upon the shoot maturity level. Application through basal dose will also help to control the shoot growth.
- iii) Remove 2-3 basal leaf on the growing shoot. This will avoid build-up of micro climate thereby reducing the chances of disease incidence.

VI. Disease management (Dr. Sujoy Saha)

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

Once the rain stops, there is a probability of powdery mildew and sulphur may be applied @2g/l to control the disease. However if the crop is more than 90 days old triazoles viz. Hexaconazole @1ml/L or Tetraconazole @ 0.75 ml /L or Difenoconazole @1ml/L or Fluopyram 200+Tebuconazole 200SC @0.5ml/L may be given for the control of powdery mildew as well as to restrict excess vegetative growth and help in fruit bud differentiation. For downy mildew control application of potassium salt of phosphoric acid @4g/l +Mancozeb @2g/L. Mancozeb will also give an additional protection against bacterial leaf spot. In case of early downy mildew infection application of 50ppm chlorine-di-oxide may be done too. To protect from anthracnose, spray with thiophenate methyl may be given @1g/L of water. Use of silicon-based adjuvants may be done for better efficacy of fungicides. It is to be noted that spraying should be done only when there is a clear sky of about 1-2 hrs.

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

Days after pruning	Risk of pests				
	Mealybug	Mite	Thrips	Caterpillar	Flea beetle
Sub cane development to Initiation of cane maturity	Low to Moderate	Moderate to High	Low to Moderate	High	Low

- Due to reduction in temperature and cloudy conditions, mealybug infestation may be noticed. Use of broad spectrum insecticides should be avoided for mealybug control. Buprofezin 25 SC @ 1.25 ml/l water may be given to manage mealybugs. Preventive plant wash, on stem and cordons, of biocontrol agents such as *Verticillium*, *Metarhizium*, *Beauveria* may be given.
- In case of thrips or caterpillar infestation, application of fipronil 80 WG @ 0.0625 g per litre or emamectin benzoate 5 SG @ 0.22 g per litre water is effective.
- Mite infestation may start appearing, therefore, monitor the vineyards carefully. If mite infestation is observed, sulphur 80 WDG @ 1.5-2.0 gram per litre or abamectin 1.9 EC @ 0.75 ml/l water is effective.