

WEATHER DATA FOR THE PREVAILING WEEK

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

I. WEATHER DATA FOR THE PREVAILING WEEK

Thursday (01/08/2019) – Thursday (08/08/2019)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nashik	23	25-27	Nashik, Ojhar, Pimpalgaon Baswant, Dindori, Vani Thu- Thu Good Rain Palkhed, Kalwan, Devla, Niphad, Shirdi, Loni, Satana Thu- Sat Moderate Rain & Sun onward Good Rain	Partly to Mostly Cloudy	12-17	84-86	90-92
Pune	23-24	25-28	Pune, Phursungi, Narayangaon, Junnar Thu- Moderate Rain, Fri Onward Good Rain Loni Kalbhor, Uruli Kanchan, Yavat, Patas, Supa, Baramati Thu-Fri Moderate Rain & Sat onward Good Rain	Partly to Mostly Cloudy	11-17	85-87	90-94
Solapur	23-24	27-30	Solapur, Nanaj Vairag, Barshi, Pangri, Pandharpur, Kasegaon Thu- Thu Moderate Rain Osmanabad, Tuljapur, Latur, Ausa Thu- Sun Moderate Rain, Mon onwards Good Rain Atpadi Thu-Fri Moderate Rain & Sat onward Good Rain	Partly Cloudy	10-20	70-77	85-89

Sangli	23	26-28	Sangli, Palus, Valva, Shirguppi, Kagwad, Miraj, Arag, Tasgaon, Kavathe Mahankaal, Vita, Palsi Thu-Fri Moderate Rain & Sat onward Good Rain Khanapur, Shetfal Thu-Thu Moderate Rain	Partly to Mostly Cloudy	12-20	79-86	90-94
Bijapur	23	27-31	Bijapur, Tikota, Telsang, Chadchan Thu- Thu Moderate Rain	Cloudy	04-10	85-86	91-100
Hyderabad	23-24	29-32	Hyderabad, Medchal Thu- Sun Moderate Rain, Mon Onward Good Rain Zahirabad Thu-Fri Moderate Rain & Sat onward Good Rain	Cloudy	11-20	70-80	86-91

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: 110

b) **Expected growth stage of the crop:** - Initiation of cane maturity to cane maturity

Expected pan evaporation: Nil to 3 mm

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

Amount of irrigation advised:

1. All the grape growing regions are forecasted to receive from moderate to good rains. In general, there will not be any need to provide irrigation in those 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 irrigate the vineyard.
3. As good rains are forecasted in many areas, 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 and less and poor quality irrigation water was used during Foundation pruning season.
 - ii) Fruit pruning is planned in August especially in Satana, Bori and Indapur.
4. The vineyards are at Cane maturity and Fruit Development stage. Provide irrigation through drip @ 2000 - 3000 litre/ha/day in case no rains are received and the soil moisture is below wapsa condition.

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 atleast five doses to reduce the leaching losses of the potassium. Apply 15 kg SOP in two – three splits during this week.
2. Apply magnesium sulphate @ 10 kg/acre in two splits followed by one foliar spray @ 3-4g/L.
3. 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. The application should be alongwith FYM/compost etc. They should be mixed in the soil and not left on the top.
4. 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 atleast 3 doses of 5kg each.
5. In case pruning is planned during September, raise Sunnhemp or Dhaincha for green manuring purpose.

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)

NIL

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

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

Rootstock planting:

- i) The rootstock training to the bamboo, removal of side shoots upto 1' and 6" height to be done.
- ii) Apply 18:46:0 @ 25kg/acre through soil. This will help for shoot development required for grafting.
- iii) Maintain only three shoots per rootstock. This will help to select the best two shoots at the time of grafting.
- iv) In case of immature shoots of rootstocks, apply potash @ 5-6 kg/acre.
- v) On old leaf of rootstock plant may suffer with the infection of rust. Hence, spraying of copper oxychloride @ 2.5g/L or Fusilazole @ 0.50 to 0.75 ml/L will be helpful

New vineyard:

- i) Shoot pinching and removal of side shoots to be done regularly. This will help to advance the cane maturity.
- ii) Apply potash @ 4-5kg/acre basis so as to arrest the vegetative growth and encourage cane maturity.
- iii) 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.
- iv) In the condition of milky white color of shoot at basal portion, Bourdeaux spray @ 0.5% will help to control the diseases.

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.
- iv) Spray Bourdeaux @ 0.75 to 1.0% depending upon the cane maturity. This will help in controlling the disease as well as advancing cane maturity.

I. Disease management (Dr. Sujoy Saha)

Days after pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthraco nose	Others (specify)
110	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. If Mancozeb will also give an additional protection against bacterial leaf spot. 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. Soil application of Trichoderma may be given either through drip or as soil drench. Prevailing humid conditions will proliferate the biocontrol agent and help I disease management.

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

Days after pruning	Risk of pests				
	Mealybug	Mite	Thrips	Caterpillar	Flea beetle
Initiation of cane maturity to cane maturity	Low to Moderate	Low to Moderate	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. Remove excess shoot to manage thrips population.
- 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.