

WEATHER DATA FOR THE PREVAILING WEEK

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

I. WEATHER DATA FOR THE PREVAILING WEEK

Thursday (22/08/2019) – Thursday (29/08/2019)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min	R H%	
	Min	Max				Min	Min
Nashik	23	25-27	Nashik, Ojhar, Pimpalgaon Baswant, Dindori, Vani Thu-Thu Moderate Rain Palkhed, Kalwan, Devla, Niphad, Shirdi, Loni, Satana Thu-Thu Light Rain	Cloudy	05-12	72-77	94-95
Pune	22-23	28	Pune, Phursungi, Narayangaon, Junnar Fri Onward Moderate Rain Loni Kalbhor, Uruli Kanchan, Yavat, Patas, Supa, Baramati Thu- Thu Light Rain	Cloudy	03-12	68-71	93-95
Solapur	23-25	31-32	Solapur, Nanaj, Kati, Vairag, Barshi, Pangri Thu-Fri Moderate Rain, Sat onwards Light Rain Pandharpur, Kasegaon, Atpadi Thu- Thu Light Rain Osmanabad, Tuljapur, Ausa Thu-Thu to Moderate Rain Latur Thu- Sat Good Rain & Sun onwards Moderate Rain	Partly to Mostly Cloudy	05-13	47-57	89-91

Sangli	22-23	26-28	Sangli, Miraj, Shirguppi, Kagwad, Arag, Sat onwards Moderate Rain Tasgaon, Vita, Palsi, Palus, Valva Thu-Thu Light Rain to Moderate Rain Kavthe Mahankal Thu-Thu to Moderate Rain Shetfal Thu-Thu Light Rain Khanapur Thu-Thu Good Rain	Partly to Mostly Cloudy	04-13	65-68	93-97
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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: 131

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

Expected pan evaporation: 3- 4 mm

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

Amount of irrigation advised:

1. Some of the 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. Wherever the vineyards are at Cane maturity stage provide irrigation through drip @ 3000 - 3500 litre/acre/day in case no rains are received.

4. 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. Remove the mulch and allow the bund/ rootzone to be fully wet with water for leaching of salts for subsequent fruit pruning.

Nutrient management:

1. After Cane maturity stage, fertilizer application is over. Look 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. 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.
3. 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 case pruning is planned during September, raise Sunnhemp or Dhaincha for green manuring purpose.
2. 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.
3. In case in calcareous soils, if SSP is preferred and applied as basal dose, mix with FYM/compost etc. to avoid phosphorus fixation.
4. Test the soil and irrigation water, to plan for nutrient and water management during fruit pruning season.
5. In areas where rains have not been received and the irrigation water availability is less, it is suggested 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.

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 plot:

- i) Apply urea @1kg/acre once through drips to maintain sap flow in the shoots.

- ii) Maintain only three straight growing and healthy shoots of rootstock.
- iii) Tie the shoots to the bamboo with the help of sutali.
- iv) Plan for grafting commercial variety of our choice.
- v) Under the condition where humidity in the atmosphere is less than 80%, irrigate the plot 2-3 days before the grafting. This will enable for sap flow of rootstock required for successful grafting.
- vi) Do not attempt grafting in flood affected area for three weeks since the leaf have been fallen due to submerging the plants in flood.

New vineyard:

- i) In flood affected area, the shoots were not matured completely during rains. Hence, after the drainage of water from vineyard, the new growth will be at faster rate. Under the condition of late pruning, allow the growing shoots to grow till 5-6 leaf stage. The growing shoot then may be pinched off so as to advance 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, fungicide spray at proper interval may be considered important.
- iv) Pinching the growing shoot tip, removal of 2-3 basal leaf, etc will also help to control the disease.
- v) Spray Bordeaux mixture @ 0.5% to initiate cane maturity and control diseases.

I. Disease management (Dr. Sujoy Saha)

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

131	MODERATE	LOW	HIGH	Bacterial leaf spot Rust
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Anthrachnose may be incident on the new leaves and Thiophenate methyl or Carbendazim @1g/litre should be applied for its control. If the anthracnose infection is heavy application of Fluopyram+Tebuconazole @0.5ml/litre may be done at 5-7 days interval. 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. There should be no confusion regarding bacterial spot symptoms on leaf (fig 1a) and anthracnose (fig 1b) as control measures are different. In vines which are not waterlogged in Sangli, the incidence of rust is heavy and immediate control measures need to be taken. Application of triazoles like hexaconazole@1ml/L or tetraconazole @ 0.75 ml /L or flusilazole@ 12.5ml/100L or difenconazole@0.5ml/L needs to be done at 5 days interval to control the disease. Application of tebuconazole@0.5ml/L or in combination with trifloxystrobin @0.175ml/L will also be helpful in controlling the disease. In vines where rust is yet to be incident, application of chlorothalonil@2g/L or copper oxychloride/hydroxide @2.5g/L should be done as a preventive measure. In fact, after two application of triazoles, application of chlorothalonil or copper oxychloride/hydroxide needs to be done to prevent secondary spread.



Fig1(a)



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

Days after pruning	Risk of pests				
	Mealybug	Mite	Thrips	Caterpillar	Flea beetle
Cane maturity and afterwards	Moderate	Moderate	Low	High	Low

- In case of 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.
- Remove excess shoot to manage thrips populations.
- Vineyards may have moderate mealybug infestation as well. However, higher 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.

