

WEATHER DATA FOR THE PREVAILING WEEK

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

I. WEATHER DATA FOR THE PREVAILING WEEK

Thursday (28/11/2019) – Thursday (05/12/2019)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min- Max	R H%	
	Min	Max				Min	Max
Nashik	19-20	29-31	-	Clear to Partly Cloudy	02-19	37-44	73-82
Pune	19-21	30- 31	Pune, Phursungi Mon- Light Rain. Tue & Wed- Drizzling. Loni Kalbhor, Uruli Kanchan, Yavat, Patas, Supa, Baramati Mon- Drizzling.	Clear to Partly Cloudy	02-21	41-46	74-80
Solapur	20-21	31-33	Solapur, Nanaj, Kati, Pandharpur, Ausa, Latur Mon & Tue- Drizzling. Atpadi, Kasegaon Mon- Light Rain.	Clear to Mostly Cloudy	07-21	33-44	74-81
Sangli	19-21	30-32	Sangli, Vita, Tasgaon, Palus, Valva , Kavthe Mahankal, Palsi, Arag, Kagwad, Miraj, Shirguppi Mon- Light Rain. Shetfal Mon & Tue- Drizzling	Partly to Mostly Cloudy	07-25	37-53	76-90
Bijapur	19-21	30-32	Bijapur, Tikota, Telsang, Chadchan Mon- Light Rain. Tue- Drizzling.	Partly to Mostly Cloudy	10-26	33-53	81-88
Hyderabad	17-19	28-30	-	Partly Cloudy	05-18	49-59	96-100

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: 74

b) Expected growth stage of the crop: - : Berry setting stage after fruit pruning

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

Expected pan evaporation: 4-5 mm

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

- a. During shoot growth stage (fruit pruning season), apply irrigation through drip @ 7,000-8,400 L/ acre/ day. Further, in case vigour is more than desired, then reduce irrigation water application by half to 3500 - 4500 L/ acre.
- b. 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.
- c. During Flowering to setting stage, apply irrigation through drip @ 2500 to 3500L/ acre/ day. Further, in case vigour is more than desired, then reduce irrigation water application by half.
- d. During Berry development stage, apply irrigation through drip @ 7,000- 8,400 L/ acre/ day.

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

Shoot growth stage:

1. Apply 25 kg Ammonium sulphate or 15 kg urea per acre in splits depending upon the soil type during Prebloom stage.
2. Apply 10 kg Magnesium sulphate per acre if the crop is between 5 leaf to prebloom stage.
3. If sodicity problem is there (available Na > 1000ppm), apply 10 kg Sulphate of potash per acre in 2 splits this week. The total SOP application should not exceed 40 kg/acre.
4. If soils are calcareous, spray Sulphate of potash and Magnesium sulphate @ 2-3g/L depending upon leaf age during prebloom stage. One spray is sufficient during this stage.

Flowering to setting stage:

1. Donot 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).
2. 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.
3. Go for Petiole sampling at Full bloom stage

Berry Development stage:

1. After Berry setting, continue initially with Phosphoric acid application @ 2 kg followed by 5 kg 12-61-0/acre.

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)

NA

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

The day temperature in grape vineyard is increasing while the night is becoming cool. In majority of the grape growing region, the dew formation in the early hours is leading to the condition of leaf wetness. This is creating the congenial condition for spread of downy mildew. In this condition, the major problems faced are as below.

Old vineyard:

In this vineyard, the leaf wetness is experienced for longer time. The duration is extended in low lying areas with black cotton soil. This is mainly due to increased relative humidity in the vineyard. The earlier infection of downy mildew on leaf will spread with the period of leaf wetness.

Based on the situation in the individual field, the following measures are suggested

- i) Remove the side shoots
- ii) The shoots after berry setting stage becomes little harder. Hence, shoot tying on the wire should be initiated.
- iii) Separation of shoots and tying on the wire will help for reduction in microclimate required for disease development.
- iv) The reduced microclimate will help in uniform spray coverage of fungicide.
- v) In the leaf wetness condition, dusting of fungicides to be preferred over spray for the control of downy mildew.

In some of the vineyards, due to continuous rains berry setting was higher. After the berry set, thinning of berries from individual bunch is given priority considering the requirement of quality grapes. Bunch and berry retention based on the purpose and also the spacing allotted to each vine to be given importance. The berry retention considering the major commercially grown variety is as below.

Variety	Bunch retention	Berries per bunch
Thompson Seedless, Tas-A-Ganesh and Clone 2A	One bunch per square feet area allotted to each vine	100-120 berries per bunch
Nana Saheb Purple	0.6 bunch per square feet area allotted to each vine	70 to 80 berries per bunch
Sonaka, Super Sonaka, Sarita Seedless and Krishna Seedless	One bunch per square feet area allotted to each vine considering the target of local market	130-140 berries per bunch

VI. Disease management (Dr. Sujoy Saha)

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

For downy mildew control application Metiram 44% +Dimethomorph 9% WG @ 2.5g/L or Dimethomorph@1g/L + Mancozeb@2g/L(tank-mix) L or Iprovalicarb+propineb @ 2.25g/L or Mandipropamid@ 0.8g/L or Benalaxyl-M 4% +Mancozeb 65% WP @2.75g/L should be applied. In case of areas where rains are prevalent and the crop is in berry setting stage application of Fosetyl-Al @1.5-2g/L or potassium salt of phosphoric acid @4g/l +Mancozeb @2g/L may be done. Please note use of copper should not be done where potassium salt of phosphoric acid is used. Application of cyazofamid @200ml/Ha may also be given for control of downy mildew but as it is a high risk fungicide, proper care must be taken regarding its dose and frequency of spray. If the infection of downy is too high, application of chlorine dioxide may be done in the evening. 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)

NA