WEATHER DATA FOR THE PREVAILING WEEK

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

I. WEATHER DATA FOR THE PREVAILING WEEK

Thursday (16/05/2019) – Thursday (23/05/2019)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nashik	22-24	38-40	**No Rain**	Clear	06-18	18-21	53-79
Pune	22-26	39-41	**No Rain**	Clear	05-19	17-24	49-68
Solapur	27-30	41-42	**No Rain**	Clear	09-21	15-18	28-33
Sangli	24-29	40-43	**No Rain**	Clear	07-24	13-18	42-62
Bijapur	27-31	39-40	**Bijapur, Telsang, Tikota, Chadchan** Tue - Drizzling	Clear	11-25	12-15	32-39
Hyderabad	27-29	41-43	**Hyderabad** Wed-Thu Drizzling **Medchal Next Thu** Drizzling **Zahirabad** Tue - Drizzling	Clear	05-16	17-23	49-63

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:33

b) Expected growth stage of the crop: - Very early pruning stage

Expected pan evaporation: 8.5 to 11 mm

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

1. **Shoot growth stage:**
   a) Irrigation water < 1dS/m : apply irrigation through surface drip @ 11,560 to 13,600 L/acre per day during shoot growth stage for Nasik and Pune region; from 12,240 - 14,960 L/acre per day for Sangli, Solapur, Hyderabad and Bijapur region.

b) Saline irrigation water (1.1 – 2.0 dS/m): apply irrigation through surface drip @ 14,450 to 17,000 L/acre per day during shoot growth stage for for Nasik and Pune region; from 15,300 – 18,700 L/acre per day for Sangli, Solapur, Hyderabad and Bijapur region.
c) In case of rains, donot irrigate if the soil is already at field capacity.
d) Mulching the vineyards during this period will reduce the salinity build up in the root zone due to upward movement of saline water from lower soil layer. This will also reduce the irrigation water requirement by another 10%.

2. **Fruit Bud Differentiation stage:** Apply irrigation through surface drip @ 5500 to 6000 L/acre per day during shoot growth stage for Nasik and Pune region and from 6000- 6500 L/acre per day for Sangli, Solapur, Hyderabad and Bijapur region.

Foundation pruning season:

1. **At shoot growth stage**, apply 25 kg urea/ acre in 2 -3 splits after sprouting. In case of vigorous growth of shoots, stop nitrogen application and wait for the growth to stabilize before resuming nitrogen application. In calcareous soils, donot apply urea, instead use Ammonium sulphate @ 40 kg/acre in atleast 3 splits from sprouting onwards till next 10 days.
2. **In case irrigation water has more than 100ppm sodium and the soil available sodium levels are above 1000 ppm**, apply Sulphate of potash @ 40-50 kg/ acre during Shoot growth stage.
3. After **3-5 leaf stage,** apply magnesium sulphate, zinc sulphate and ferrous sulphate @ 20kg/acre in atleast 2 splits.
4. During **fruit bud differentiation stage**, based upon soil test values, apply 45 – 50 kg phosphoric acid or 250 kg SSP in case the soils are deficient in phosphorus. Phosphoric acid application is desirable in calcareous soils.
5. In case faster growth is observed (intermodal distance > 5 cm approx.), skip nitrogen application. Still the growth is not checked then reduce the irrigation water application.
6. **Possibility of leaf curling could be there**. Check the reasons whether excess growth or moisture stress or sucking pest injury or potassium deficiency. In case of excess growth, then follow the advise given in item no.3. For moisture stress, check whether the irrigation water is saline or quantity of water applied is less. If saline, then increase the quantity of irrigation water application to remove the salts. The sucking pest injury like hoppers has relationship with potassium build up in the vines and could lead to leaf curling. Control sucking pest and at the same time foliar application of potassium sulphate is advised to mitigate the potassium deficiency followed by application through fertigation @ 20-25 kg/acre.
7. At 45 DAP, **perform petiole test to know the nutrient content of the vines**. The petioles should be collected from 5th leaf from the base of the shoot counting the leaves even if they have been removed.
8. Keep a close watch on the development of **leaf blackening** symptoms from the margin.
9. Apply 10-15 kg Magnesium Sulphate/ acre between 50-60 days after pruning.
10. In calcareous soils, provide foliar application of Magnesium sulphate (@3g/L) followed by Sulphate of Potash (@ 4g/L) once in this growth stage.

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

Nil

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

Old vineyard:

Foundation pruning is done during April second week. At this stage the sub cane development is also in progress. In majority of the vineyards, the cordon developed during the last season was either dried due to dead arm or could not be developed due to immature canes. Hence, while developing the canes, the last shoot to be turned for extension of cordon. This will help to develop complete cordon during this season.

In the vineyard during first year, ferrous deficiency symptoms are prominent on growing leaf. Hence, application of ferrous sulphate as a basal dose and also through spray @ 2-3 g per litre water may be done on priority. The spray may be repeated for 3 to 4 times.

While doing the sub canes on growing shoots, the late coming shoots may be pinched off at 1-2 leaf stage. These shoots will not have fruit bud differentiation since it will be matured late. After fruit pruning, these canes produces fillage type of situation.

After the sub cane, the sprouting of side shoots will be in excess. Sometimes, from basal portion, the side shoots will be visible. This will help to make the dense canopy thereby increasing the chances of powdery mildew incidence. Hence, considering the requirement of canes, only single or double sub cane to be maintained and other side shoots to be removed.

In majority of the vineyards, the dead arms on the cordons are experienced. Hence, the bud sprouting will be minimum. This may not be sufficient to achieve economic yield. Hence, depending on the damage on the cordon, the available canes are to be either maintained as single sub cane or double sub cane.

VI. Disease management (Dr. Sujoy Saha)

Days after pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
33	NIL	LOW	NIL	-

As temperature is on the rise water spray may be given in plots where pruning has just taken place. In regions where early sprouting is present, application of fungicides like 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. To protect from anthracnose, a prophylactic spray with thiophenate methyl/carbendazim may be given @1g/L of water.

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

Days after pruning	Risk of pests				
	Mealybug	Mite	Thrips	Caterpillar	Flea beetle
3-4 leaves stage after foundation pruning	High	Nil	High	High	Low

- Spraying of imidacloprid 17.8 SL @ 0.4 ml per litre water will help in controlling thrips and mealybug on new growth.
- 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.