WEATHER DATA FOR THE PREVAILING WEEK

Date of Fruit Pruning: 28/09/2020

Wednesday (09/12/2020)–Wednesday(16/12/2020)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min-Max	R H%	
	Min	Max				Min	Max
Nashik	18-20	28-31	**Nashik, Pimpalgaon Baswant, Ozar, Palkhed, Dindori, Devla, Niphad, Vani, Loni, Shirdi, Kalwan** -Fri & Mon- Drizzling. Sat & Sun- Good Rain.	Partly Cloudy	0-9	21-63	36-84
Pune	14-18	24-30	**Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Narayangaon, Supa, Junnar** Sat- Light Rain. **Yavat, Patas, Baramati** Sat to Mon- Drizzling.	Partly Cloudy	0-8	37-46	48-73
Solapur	17-19	27-33	**Solapur, Vairag, Nannaj, Kati, Pangri, Osmanabad, Pandharpur, Tuljapur, Barshi, Kasegaon, Atpadi, Latur, Ausa** -No Rain.	Partly Cloudy	3-10	29-40	49-72
Sangli	14-19	27-31	**Sangli, Miraj, Kagvad, Palus, Tasgaon, Shetfal, Khanapur, Palsi, Shirguppi, Vita, Kawthe Mahakal, Arag, Walva** Thu- Moderate Rain.	Partly Cloudy	1-10	31-45	62-83
Bijapur	16-19	27-30	**Bijapur, Tikota, Telsang, Chadchan** -No Rain.	Partly Cloudy	5-12	29-44	69-89
Hyderabad	15-17	25-29	**Hyderabad, Medchal, Zahirabad** -No Rain.	Partly Cloudy	1-7	28-40	55-76

II. Water management (Dr. A.K. Upadhyay)

a) **Days after fruit pruning:** 72 days
b) **Pan evaporation**: Pan evaporation: 4-5 mm

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

1. In case the soil is under wapsa (field capacity) condition, donot irrigate the vineyard.
2. During shoot growth stage (fruit pruning season), apply irrigation through drip @ 6800- 8400 L/ acre/ day. Further, in case vigour is more than desired, then reduce irrigation water application to 3000 - 4500 L/ acre.
3. 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.
4. 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.
5. During Berry development stage, apply irrigation through drip @ 6800- 8400 L/ acre/ day.

Shoot growth stage:

1. Inflorescence necrosis could be a issue in dense canopy. Remove side shoots and reduce canopy to allow penetration of the sunlight for proper aeration. Manage canopy for adequate sunlight and air movement within the canopy for avoiding/ minimizing problems of kooj (inflorescence necrosis).
2. Donot apply any nitrogen based fertilizer just before Flowering to Setting stage to avoid problems of kooj (inflorescence necrosis).
3. If SOP not applied, then apply 15 kg SOP and follow it up with SOP spray for building up the potassium levels in the vines. This will be especially beneficial during low temperature and rainy conditions.

4. Apply 10 kg Magnesium sulphate per acre if the crop is between 5 leaf to prebloom stage.
5. In case of rains, foliar spray of Sulphate of potash @ 2-3g/L should be given.

Flowering to setting stage:

1. 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. Petiole nutrient testing: At 70% capfall stage, petiole samples should be taken for nutrient analysis. The leaf opposite the bunch should be removed for sampling.

Berry Development stage:

1. 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.
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. 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.
5. In case of rains, foliar spray of Sulphate of potash @ 3-4g/L should be given.

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

Nil.

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

1) Reduction in temperature and berry development:

At present the minimum temperature in the atmosphere is started reducing. This may result into reduction of berry size. To avoid, following practices are suggested.

a) Use of mulching on the bund. This will help to increase the temperature in root zone.
b) Loosening of soil in the root zone. This will also support to increase temperature in root zone.
c) Increase in irrigation will also help to increase the temperature of the vineyard.
d) Under the condition of low temperature, fire in different spots will also help in increasing the temperature

2) Source: sink in relation to bunch development:

For bunch development, leaf plays an important role. For a bunch with 450 to 500g weight, the shoot with 8 to 10 mm diameter requires 16 to 17 leaf. The bunch appears at 5^{th} leaf position, hence there should be 10-12 leaf above the bunch. For proper development of a bunch all the available leaf should be physiologically active. Hence open canopy should be preferred.

V. Disease management (Dr. Sujoy Saha)

Days after fruit pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
72	Low	Moderate	Low	Nil

An application of triazoles like Hexaconazole or Difenoconazole or tetraconazole @ 1ml/L may be done to control powdery mildew. Application of high value chemicals like Fluopyram + Tebuconazole @0.5ml/L or Fluxapyroxad+ Difenoconazole @ 0.8ml/Ha or cyflufenamid @ 0.5ml/L may be done but within 50 days after fruit pruning. Vines in berry setting stage should resort to sulphur 80WDG @ 2g/L for managing powdery mildew. Application of Ampelomyces quisqualis @ 6-8g/L should be done now as the conditions are suitable for its multiplication and establishment.For all fungicide applications use of any silicon based adjuvants @ 1ml/L will enhance the efficacy of spray. Drip application of Trichoderma may be given in areas where there is slight drizzle which will enable it to multiply. In late pruned crop, preventive application of Mancozeb @2g/L for downy mildew may be continued.If downy mildew persists, application of potassium salt of phosphoric acid @4g/L +mancozeb @2g/L may be done.

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

Growth Stage: Berry setting to development stage after October pruning

- Thrips population may be high in most of the grape growing areas. The vineyards in berry setting and early berry development are most susceptible for thrips damage. Spraying of emamectin benzoate 5 SG @ 0.22 gram per litre water or cyantraniliprole 10 OD @ 0.7 ml per litre water or spinosad 45 SC @ 0.25 ml per litre or spinetoram 11.7 SC @ 0.3 ml per litre water is effective to manage thrips both.
- In case of leaf roller or bunch webber infestation, application of cyantraniliprole 10 OD @ 0.7 ml per litre water is effective for it's management.
- If leafhopper infestation is observed, spray lambda cyhalothrin 4.9 CS @ 0.5 ml/L water at night with a white light bulb at rear side of the tractor.
- 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, then buprofezin 25 SC @ 1.25 ml/L water or spirotetramat 15.31 @ 280 ml per acre may be used for management of mealybugs as this insecticide does not harm beneficial organisms in the vineyard. Soil drenching of clothianidin 50 WDG @ 200 gram per acre may also be given.
- Sulphur 80 WDG @ 1.5-2.0 g/L or abamectin 1.9 EC @ 0.75 ml/L or binfenazate 22.6 SC @ 0.5 ml/L water may be applied if mite infestation is observed.