WEATHER DATA FOR THE PREVAILING WEEK

Date of Fruit Pruning: 28/09/2020

Wednesday (16/12/2020)–Wednesday(23/12/2020)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min-Max	R H%	
	Min	Max				Min	Max
Nashik	14-19	29-30	**Nashik, Pimpalgaon Baswant, Ozar, Palkhed, Dindori, Devla, Niphad, Vani, Loni, Shirdi, Kalwan** -No Rain.	Partly Cloudy	0-23	36-41	56-71
Pune	18-21	30-32	**Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Narayangaon, Supa, Junnar** Sat- Light Rain. **Yavat, Patas, Baramati** -No Rain.	Partly Cloudy	0-9	34-38	45-64
Solapur	15-18	30-31	**Solapur, Vairag, Nannaj, Kati, Pangri, Osmanabad, Pandharpur, Tuljapur, Barshi, Kasegaon, Atpadi, Latur, Ausa** -No Rain.	Partly Cloudy	4-9	29-37	49-77
Sangli	14-18	30-31	**Sangli, Miraj, Kagvad, Palus, Tasgaon, Shetfal, Khanapur, Palsi, Shirguppi, Vita, Kawthe Mahakal, Arag, Walva** -No Rain.	Partly Cloudy	2-12	28-39	68-75
Bijapur	13-17	32-33	**Bijapur, Tikota, Telsang, Chadchan** -No Rain.	Partly Cloudy	4-12	32-45	59-83
Hyderabad	11-16	24-29	**Hyderabad, Medchal, Zahirabad** -No Rain.	Partly Cloudy	1-6	26-47	55-82

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

a) **Days after fruit pruning:** 79 days
b) **Pan evaporation**: Pan evaporation: 3-5 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 @ 5100- 8500 L/ acre/ day. Further, in case vigour is more than desired, then reduce irrigation water application to 2500 - 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 @ 2000 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 @ 5100- 8500 L/ acre/ day.

IV. Soil and Nutrient management:

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.

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. 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.
2. 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.
3. Apply magnesium sulphate through drip @ 10kg/acre from 8-10mm berry size.
4. Foliar spray of sulphate of potash @ 3g/acre at 8-10mm berry size.
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.
6. If soils are calcareous, then apply zinc sulphate and ferrous sulphate @ 5 kg/acre at 65-70 days after pruning.

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

Nil.

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

Following practices are suggested during this week.

Berry thinning:

1) Berry thinning should be done based on rachis elongation.
2) Each bunch should consist of 100 to 125 berries.
3) There should be 10 to 12 rachis in a bunch.
4) While thinning of berries, retain first three rachis followed by removal of alternate rachis.
5) Removal of alternate rachis will also depends on the compactness of a bunch.
6) If the bunch was not elongated during prebloom stage, we may have to remove two rachis.
7) The berries from rachis are also to be removed. This will help in obtaining loose bunch.
8) Care should be taken that the tender grape berries are not touched by scissors used for thinning.
9) Spray fungicide after berry thinning. This will help to control further infection to healthy berries if any.
10) After the berry thinning, bunches are to be kept under canopy.

V. Disease management (Dr. Sujoy Saha)

Days after fruit pruning	Risk of diseases			
	Downy mildew	**Powdery mildew**	**Anthracnose**	**Others (specify)**
79	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. Drip application of Trichoderma may be given in areas where there is slight drizzle which will enable it to multiply. In regions where light to moderate showers was prevalent, application of chitosan @ 2ml/L may be done which will protect berry cracking as well as control powdery mildew infection. 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

- Caterpillar and mealybug population may increase in most of the grape areas due to cloudy conditions and increase in relative humidity.
- Emamectin benzoate 5 SG @ 88 gram per acre or cyantraniliprole 10 OD @ 0.7 ml per litre water is effective against *Spodoptera* caterpillars.
- Buprofezin 25 SC @ 1.25 ml per litre water or spirotetramat 15.31 OD @ 280 ml per acre are effective against mealybugs. Soil drenching with clothianidin 50 WDG may also be given for mealybug management. Entomogenous fungus such as *Metarhizium*, *Beauveria* and *Lecanicillium* can be used for plant wash at 15 days interval to reduce mealybug populations.
- Bunch webbing caterpillars may start damaging bunches in most of the grape areas where humidity is high. The most effective way to control them is to collect and kill them by hand as insecticides may not reach inside the bunch. The caterpillars on leaves are also needs to be killed as they can go inside the bunch later on. Spraying of emamectin benzoate 5 SG @ 0.22 gram per litre water or cyantraniliprole 10 OD @ 0.7 ml per litre is effective to manage them.
- Sulphur 80 WDG @ 1.5-2.0 g/L water may be applied if mite infestation is observed.