WEATHER DATA FOR THE PREVAILING WEEK

Date of Fruit Pruning: 28/09/2020

Wednesday (25/11/2020)–Wednesday(02/12/2020)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min-Max	R H%	
	Min	Max				Min	Max
Nashik	16-22	30-31	Nashik, Pimpalgaon Baswant, Ozar, Palkhed, Dindori, Devla, Niphad, Vani, Loni, Shirdi, Kalwan – No Rain..	Partly Cloudy	3-30	27-45	63-80
Pune	12-19	25-30	Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Narayangaon, Supa, Junnar Sat- Light Rain. Yavat, Patas Fri- Light Rain. Sat- Moderate Rain. Baramati Sat- Moderate Rain.	Partly Cloudy	0-29	33-55	68-85
Solapur	17-20	26-32	Solapur, Vairag, Nannaj, Kati, Pangri, Osmanabad, Pandharpur Thu & Fri- Light Rain. Sat- Moderate Rain. Tuljapur Fri & Sat- Moderate Rain. Barshi Thu, Fri & Sun- Light Rain. Sat- Good Rain. Kasegaon, Atpadi Sat- Moderate Rain. Sun- Light Rain. Latur, Ausa Thu & Sun- Light Rain. Fri & Sat- Moderate Rain.	Partly Cloudy	5-29	23-63	62-90
Sangli	15-20	25-31	Sangli, Miraj, Kagvad, Palus, Tasgaon, Shetfal, Khanapur, Palsi, Shirguppi, Vita, Kawthe Mahakal, Arag, Walva Fri & Sat- Light Rain.	Partly Cloudy	5-29	29-62	68-90
Bijapur	16-20	24-31	Bijapur, Tikota Fri- Moderate Rain. Sat & Sun- Light Rain. Telsang Fri to Sat- Light Rain. Chadchan Thu, Fri & Sun- Light Rain. Sat- Moderate Rain.	Partly Cloudy	6-30	28-70	70-95
Hyderabad	15-19	21-28	Hyderabad, Medchal Thu & Fri- Good Rain. Sat- Light Rain. Zahirabad Thu & Fri- Good Rain. Sat- Moderate Rain.	Partly Cloudy	2-19	44-72	81-100

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

a) **Days after fruit pruning:** 58 days
b) **Pan evaporation**: Pan evaporation: 4-5 mm

Amount of irrigation advised

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.

IV. Soil and Nutrient management

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. While application, check the vigour of the crop.
2. If the crop is between 5 leaf to prebloom stage, apply Zinc sulphate and Ferrous sulphate @ 15 kg/ acre based upon soil test value. Boron application should be carried out only if soil test value indicates low levels and the irrigation water does not contain boron.
3. Apply 10 kg Magnesium sulphate per acre if the crop is between 5 leaf to prebloom stage.
4. One foliar spray of Sulphate of potash and Magnesium sulphate @ 2-3g/L depending upon leaf age during prebloom stage should be made.

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. 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. 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.

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

If the vineyards are in flowering stage plant growth regulators or other growth-promoting chemicals may not be applied

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

1) Reduction in temperature and berry development:

At present the possibility of cyclone in Tamil Nadu may have some effect in Maharashtra. The result may be in the form of cloudiness and erratic rainfall in some parts of Sangli district.

If the temperature (maximum and minimum) reduces, the vineyard in the stage of berry development (4-5mm size) may suffer for berry sizing. Since the physiological processes takes place during particular temperature, the reduction in temperature may lead to slow down of physiological processes thereby reduction in berry size. Under such condition, following practices are advised.

a) Increase the irrigation in the vineyard. This may help to increase the temperature.
b) Use mulching in vineyard. This will also support to increase the temperature.
c) 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)**
58	Low	Moderate	Low	Nil

As cloud cover is expected in most of the grape growing areas and humidity is low, powdery mildew is expected to occur. 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 may be done but within 50 days after fruit pruning. 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 the BCA to multiply. In late pruned crop, preventive application of Mancozeb @2g/L for downy mildew may be continued.If dew is prevalent in any area, dusting of mancozeb @ 3-5 kg/acre may be done.

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

Growth stage	Risk of pests					
	Mealybug	Mite	Thrips	Caterpillar	Flea beetle	Jassid
Early shoot growth stage, pre flowering, flowering and berry setting after forward pruning	Moderate to high	Moderate	Moderate to high	High	High	Moderate to high

- In case of caterpillar and thrips infestation, application of fipronil 80 WG @ 0.0625 g per litre (before flowering stage) or emamectin benzoate 5 SG @ 0.22 g per litre or cyantraniliprole 10 OD @ 0.7 ml per litre water is effective.
- For flea beetle management, fipronil 80 WG @ 0.0625 g per litre (before flowering stage) or Imidacloprid 17.8 SL @ 0.4 ml/L or spinosad 45 SC @ 0.25 ml per liter water at night is effective.
- Vineyards may have moderate mealybug infestation as well. 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 is less harmful to beneficial organisms in the vineyard.

Spraying of imidacloprid 17.8 SL @ 0.4 ml/L water or emamectin benzoate 5 SG @ 0.22 gram per litre water or fipronil 80 WG @ 0.06 gram per litre water or buprofezin 25 SC @ 1.25 ml/L water during night are effective to manage jassids.