WEATHER DATA FOR THE PREVAILING WEEK

Wednesday (8/4/2020) – Wednesday (15/4/2020)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr) Min-Max	R H%	
	Min	Max				Min	Max
Nashik	19-24	36-41	**Loni** Wed, Thu- Drizzling.	Clear to Partly Cloudy	2-17	10-20	42-76
Pune	20-24	36-40	**Loni Kalbhor** Sat- Drizzling. **Yavat, Patas, Baramati** Thu- Drizzling. **Junnar** Thu & Fri- Drizzling.	Clear to Partly Cloudy	1-18	13-19	54-70
Solapur	23-28	39-41	**Solapur** Wed, Fri & Sat- Drizzling. **Nanaj, Vairag, Kati, Osmanabad, Tuljapur, Latur, Ausa, Pandharpur, Pangri, Barsi** Sat, Sun & Next Wed- Drizzling.	Clear to Partly Cloudy	4-17	13-18	38-55
Sangli	20-24	38-40	**Sangli,Palus, Tasgaon, Miraj, Shirguppi, Kagwad, Agar, Shetphal, Khanapur** Sat & Next Wed- Drizzling.	Clear to Partly Cloudy	2-20	15-20	58-75
Bijapur	22-26	38-39	**Bijapur, Tikota,Telsang** Wed, Thu & Sat- Drzzling. **Chadchan** Sat- Drizzling.	Clear to Partly Cloudy	4-17	14-19	41-60
Hyderabad	23-24	36-39	**Hyderabad, Zahirabad, Medchal** Wed, Thu & Sat- Drzzling.	Clear to Partly Cloudy	2-14	22-36	59-90

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.

a) Days after pruning: -

b) Expected growth stage of the crop: Rest period

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

I a) Water management

Expected pan evaporation: 8.5 to 11.0 mm

Amount of irrigation advised:

1. **During ripening to harvest stage**, apply irrigation through surface drip @ 14,450 to 18,700 L/acre per day.
2. **During ripening to harvest stage**, as the temperature is rising, do not withhold water as this might lead to loose bunch, thereby affecting the quality of produce.
3. **Rest period:** Provide only need based irrigation to protect the existing leaves from drying and also contribute towards increasing the reserves of the vines through photosynthetic activity. The quantum of irrigation water applied should be approx. 5000 – 6000 L/ acre, once in a week. Care should be taken to reduce/stop the water in case new growth is observed on the shoot.
4. Many areas are expected to receive drizzling to light rainfall. In case rainfall exceeds 2.5mm, no irrigation should be applied especially during rest period.
5. **Cover the cordons of the pruned vines with shade net**, if available, for uniform sprouting as well as reducing the irrigation water needs by 20-25 %. Shade net coverage will reduce the temperature impact on the cordons. However, remove shade net at 3-5 leaf stage.
6. If shade net is not available, spray the cordons with water during the peak heat period i.e. 2-3 pm to reduce the heat effect on the buds.
7. **Shoot growth stage:**
   a) Irrigation water < 1dS/m: apply irrigation through surface drip @ 11,560 to 14,960 L/acre per day during shoot growth stage.
   b) Saline irrigation water (1.1 – 2.5 dS/m): apply irrigation through surface drip @ 14,450 to 18,700 L/acre per day during shoot growth stage.
   c) Mulching the vineyards during this period will reduce the salinity build up in the root zone as there will be no evaporation from the soil surface. This will also reduce the irrigation water requirement by another 10%.
   d) In case the shoot growth is vigorous, reduce irrigation water application till growth is controlled.
   e) In case there are rains, withhold irrigation water application if the soil is at field capacity (wapsa condition).
8. **Fruit Bud Differentiation stage:** Apply irrigation through surface drip @ 6000 to 7000 L/acre per day.

9. In case there is **probability of less irrigation water availability**, then flood the bund (not whole vineyard) at pruning and mulch the bunds. Flooding the bund will reduce the accumulated salt load in the root zone and mulching will reduce the evaporation of water from soil surface. Thus, this will reduce the salt load in the soil and at the same time saturate the soil leading to proper sprouting. Further, in case less irrigation water is available still the newly emerging shoots will not be damaged due to salinity.

I b) Nutrient Management

i) Pre- Pruning Practices

1. If planning for foundation pruning in next 10- 15 days, it is advised to get soil and water analysed for planning nutrient and water application schedule for foundation pruning season.
2. The vineyards where sodicity problems are there, apply gypsum to the soil for removal of sodium from the soil exchange complex. In case of the sodic soils are calcareous also, use sulphur for similar purpose.
3. If soils are calcareous in nature, then apply 50 kg sulphur between the vines in the soil. The sulphur should be properly mixed in the soil for improving its efficacy in taking care of calcium carbonates. Mixing of sulphur in organics further improves its efficacy.
4. Apply FYM/ compost/other organic sources including green manuring atleast 12-15 days before Foundation pruning. If possible mix 200 kg Single super phosphate in the FYM and apply in the soil. Application of organics improves the nutrient and water retention in the root zone and reduces nutrient losses from the profile.
5. Never apply water soluble fertilisers like urea, ammonium sulphate etc. as basal, as they will leached and contaminate the ground water. They should be applied only from sprouting onwards.

ii) 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 at least 3 splits from sprouting onwards till next 10 days.
2. In case of vigorous growth of shoots, stop nitrogen application and wait for the growth to stabilize before resuming nitrogen application.
3. Based upon soil test value, apply Zinc sulphate @10 kg/acre along with Ferrous sulphate @10kg/acre followed by Magnesium sulphate @15kg/acre in atleast 2 splits during 5-7 leaf stage. Boron application should be strictly based upon soil and petiole test.

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.

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

Foundation pruning: In these vineyards, uniform and early bud sprouting is important. This will require application of hydrogen cyanamide at lower dose (20-25ml/L water) either through swabbing or spray with same concentration. However, under present situation of non-availability of hydrogen cyanamide, only water spray on cordon twice in a day (11.0 am to 12.0 pm and 2.0 to 4.0 pm) will help to achieve the sprouting. The spray can be started from 5^{th} day to 15^{th} days from foundation pruning. In addition, shade provided on the cordon will support in reducing temperature and increasing relative humidity in the vineyard thereby helping in early and uniform bud sprouts.

Vineyards after re-cut: In these vineyards, under high temperature, the newly sprouted shoot will grow at faster rate. The growers tend to irrigate with higher quantity of irrigation water. This creates the relative humidity thereby increasing the chances of thrips incidence as well as potash deficiency. Potash spray @ 1.5 to 2.0g/L water in case of older leaf are showing cupping symptoms. In the condition of curling of growing leaf, spray for thrips management.

The new growth should be utilized for formation of trunk and cordon. Hence, to achieve good growth, application of only nitrogen and phosphorous based fertilizers are supplied to the vine.

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III. Disease management (Dr. Sujoy Saha)

Days after pruning	**Risk of diseases**			
	Downy mildew	**Powdery mildew**	**Anthracnose**	**Others (specify)**
-	Nil	Nil	Very low	nil

As the weather is relatively dry in most of the places, there is no chance of downy mildew incidence. But in very early pruned vines, there is a chance of incidence of anthracnose in early shoots or if there is a chance existence of inoculum in the old, improperly pruned canes. Drizzles in these areas can trigger both anthracnose as well as bacterial leaf spot. Hence, application of carbendazim 12% + mancozeb 63% @ 2 gm / liter should be done in these areas which control both anthracnose and bacterial leaf spot. Carbendazim will take care of anthracnose while mancozeb will control bacterial leaf spot.

In areas where pruning is to be taken up in the coming weeks, clean cultivation practices need to be followed. After pruning, the pruned material should be disposed in a pit, away from the vines. This will reduce the primary inoculum of downy mildew diseases, if any. (keeping into consideration the heavy incidence of downy mildew last season). Immediately, after pruning, the cordon, has to be washed/drenched with mancozeb @2.5 – 3 g/ liter followed by sulphur @ 2g/ liter after 7 days. This will also clear the downy mildew inoculum from the cordons.

Due to improper drying/ lack of sunlight, there is may be a chance of blackening of raisins, which may be due to fungal / saprophytic contamination. To control that application of hydrogen peroxide @ 2-3 ml/ liter of water or chlorine dioxide@ 50-100 ppm may be done. Dipping of raisins in chlorine dioxide in 50-100 ppm solution might also be done instead of spraying.

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

Give preventive spray of imidacloprid 17.8 SL @ 0.4 ml per litre water at the time of bud sprouting after April pruning to manage flea beetle and mealybug shoot malformation.