

मौसम पूर्वानुमान आधारित साप्ताहिक सलाह

Weather Forecast Based Weekly Advisory

(Assumption: Fruit Pruning date - 15/09/2018)

I. Weather Data for the Prevailing Week

Thursday (28/03/2019) -- Thursday (04/04/2019)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nashik	21-23	39-40	No Rain	Clear	05-17	10-13	44-63
Pune	22-23	39-41	No Rain	Clear	04-16	11-15	52-58
Solapur	25-26	40	No Rain	Clear	04-15	13-15	31-41
Sangli	23-24	40-41	No Rain	Clear	06-17	09-13	64-80
Bijapur	25-27	40-41	No Rain	Clear	06-17	11-14	41-56
Hyderabad	24-25	36-38	No Rain	Clear	06-20	13-16	42-55

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: Nil

b) Expected growth stage of the crop: - Post harvest resting stage

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

Expected pan evaporation: 8 to 10 mm

Amount of irrigation advised:

1. **During ripening to harvest stage**, apply irrigation through surface drip @ 13,600 to 15,300 L/acre per day during shoot growth stage for Nasik, Pune and Hyderabad region and from 15,300 - 17,000 L/acre per day for Sangli, Solapur and Bijapur region.
2. **During ripening to harvest stage**, as the temperature is rising, donot 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 L/ acre, twice in a week. Care should be taken to reduce/stop the water in case new growth is observed on the shoot.
4. **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. This when followed by mulching will reduce the evaporation of water from soil surface and at the same time maintain the soil temperature. 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 and the Electrical conductivity is of the water is more than 1dS/m, still the newly emerging shoots and leaves will not be damaged due to salinity.

5. **After Foundation pruning**, apply irrigation through surface drip @ 13,600 to 15,300 L/acre per day during shoot growth stage for Nasik, Pune and Hyderabad region and from 15,300 - 17,000 L/acre per day for Sangli, Solapur and Bijapur region.

IV. Soil and Nutrient requirement (Dr. A.K. Upadhyay)

Rest period to Foundation pruning:

1. Apply 15kg Urea, 10 kg DAP and 15 kg Sulphate of Potash/ acre in two splits in next 15-20 days.
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 calcareous soils, use sulphur for similar purpose.
3. 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.

Foundation pruning season:

1. 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.
2. 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 lead to better utilization of sulphur for reducing calcium carbonate in the root zone along with reduction in soil pH also.
3. 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.
4. In case during Shoot growth stage, if the growth cannot be controlled even after stopping nitrogen application, then reduce irrigation water application. After the growth is controlled then resume normal irrigation water application.

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

Nil.

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

New vineyard:

1. Train the new growing shoots to bamboo. This will help to obtain straight growing trunk and avoid sun burn on trunk.
2. During the time of shoot pinching below the first wire, care should be taken for vigorous growth. This will help to increase the intermodal length of primary as well as secondary arm. The increased internode will help in maintaining the open canopy in future.
3. Apply nitrogenous and phosphatic fertilizers only during the cordon development. This will help in increasing the vigor.

Rootstock planted gardens:

1. With the increase in temperature in the grape vineyard, the water requirement for root development will be increased. Hence, under the water shortage condition, the

irrigation during morning or evening hours will help to use the available water efficiently.

2. Application of DAP @ 20-25kg/acre after green shoot emergence to be taken up. This will help for root and shoot development.

Old vineyard:

1. Trench opening (size: 2 feet wide, 3-4inch deep and length according to the spacing allotted to each vine) should be done 15 days before the actual pruning.
2. Root pruning should not exceed 30%. More damage to root will results into cell desiccation and death. In severe damage cases, the cordons becomes blind resulting into dead arm. Hence, trench opening, fertilizer application and trench closing should be done immediately.
3. Irrigation to the vines after fertilizer application should be done immediately.

VII. Disease management (Dr. S.D. Sawant and Dr. Sujoy Saha)

Days after pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
—	Nil	Nil	Nil	Nil

There is no possibility of rains but wherever cloudy conditions are prevailing, it is advised to go ahead with pruning so as to ensure uniform sprouting.

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

Days after pruning	Risk of pests			
	Mealybug	Mite	Thrips/leafhopper	Caterpillar
>165 Stage: Vine resting stage after harvest	High	High	Low	Nil

- Spot plant wash with buprofezin 25 SC @ 1.25 ml per litre water with 1.5-2.0 litre water per plant.
- Sulphur 80 WDG @ 1.5-2.0 g/L or abamectin 1.9% EC @ 0.75 ml/L water may be applied if mite infestation is observed.

Crop advisory relevant to different places is prepared by experts, considering forecasted weather, crop growth stages in majority of vineyards and ground information on incidence of different conditions in different grape growing areas received from regular interaction with progressive grape growers. No claims are made on its correctness.

Usefulness of this information may be communicated to us at director.nrcg@icar.gov.in.