मौसम पूर्वानुमान आधारित साप्ताहिक सलाह
Weather Forecast Based Weekly Advisory

(Assumption: Fruit Pruning date - 15/10/2016)

I. Weather Data for the Prevailing Week

Thursday (20/04/2017) - Thursday (27/04/2017)

Location	Temperature		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nasik	21-22	34-37	**No Rain** Nasik, Ojhar, Pimpalgaon Baswant, Vani, Palkhed, Dindori, Shirdi, Loni, Rahata, Niphad, Kalwan, Devla, Lasalgaon, Satana.	Clear	06-23	17-26	70-97
Pune	21-23	36-37	**No Rain** Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Yavat, Rahu, Patas, Pargaon, Supa, Baramati, Narayangaon, Junnar.	Clear	06-24	17-24	51-87
Solapur *	26-28	40-42	**No Rain** Solapur, Nanaj, Kati, Atpadi, Vairag, Pandharpur, Kasegaon, Barshi, Pangri, Kari, Latur, Ausa, Osmanabad, Tuljapur.	Clear	03-26	08-13	30-45
Sangli *	23-25	38-41	**No Rain** Sangli, Miraj, Shirol, Arag, Shirguppi, Kagvad, Kavate Mahankal, Palus, Valva, Palsi, Shetfal, Vite, Khanapur	Clear	06-26	10-17	47-69
Bijapur *	26-27	39-41	**No Rain** Bijapur, Tikota, Telsang, Chadchan	Clear	06-24	09-13	30-44
Hyderabad *	26-27	39-41	**Drizzling-** Medchal, Hyderabad (Tue) **No Rain** Rainlaguda., Zahirabad	Clear	03-23	12-18	31-64

*** Tropical storm conditions possible**

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: < 7 days

b) Expected growth stage of the crop: Dormant bud (Foundation pruning)

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

Expected pan evaporation: 7 to 11 mm

Amount of irrigation advised

1. Rest period: There is need to provide need based irrigation to protect the existing leaves from drying, so that it will 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.
2. After Foundation pruning, apply 11,900 to 15,300 L/acre per day during shoot growth stage for vineyards in Nasik and Pune, 15,300 to 18,700 L/acre per day for Sangli, Bijapur and Hyderabad regions during shoot growth stage. For Solapur, apply 17,000 to 18,700 L/acre per day during shoot growth stage.
3. In case there is probability of less irrigation water availability, then flood the bund (not whole vineyard) at pruning and mulch the bunds. Mulching will reduce the evaporation of water from soil surface. Flooding the bund will wet the deeper layers and thus, also reduce the evaporation losses. Thus, this will reduce the salt load in the soil and at the same time saturate the soil leading to proper sprouting.
4. Cover the cordons of the pruned vines with shadenet, if available, for uniform sprouting as well as reducing the irrigation water needs by 20-25 %. Shadenet coverage will reduce the temperature impact on the cordons. However, remove shadenet after 3-5 leaf stage.
5. If shadenet 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.

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

Rest period to foundation pruning:

1. Apply 10kg Urea, 10 kg DAP and 10 kg Sulphate of Potash/ acre in two splits every 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. Before starting pruning, go for soil and irrigation water testing to plan for soil, nutrient and water management.

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 20 kg urea/ acre in 2 -3 splits after sprouting. In case the soil is calcareous, use ammonium sulphate @ 30 kg/ acre in 2 -3 splits. Donot exceed 65 kg urea or 100 kg Ammonium sulphate on per acre basis during shoot growth stage. In case of vigorous growth of shoots, stop nitrogen application and wait for the growth to stabilize before resuming nitrogen application.

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

1. Apply hydrogen cyanamide @ 20 ml/liter of water on dormant buds after pruning. This will help for early and uniform bud sprouting.
2. Due to high temperature and low RH, the sprouting will be delayed. Therefore, apply water spray twice in a day (from 6^{th} to 7^{th} days after foundation pruning) at 11.0 am to 12.0 pm and again 3.0 to 4.0 pm. This will help to moderate the temperature and increase the humidity on the cordons to facilitate bud sprouting.

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

Once the harvesting is over, the vines need to be given a rest for a period of about 15 to 20 days. During this period, the small quantity of fertilizers and irrigation should be given. Foundation pruning is to be done leaving one bud on the cane. This will help to achieve uniform bud sprouts. During coming week, the atmospheric temperature is expected to increase beyond 42^0C with R.H. less than 20%. This will delay the bud sprouts. Exposure of cordon in this high temperature for a longer period may lead to formation of dead arm. Such arms will not bear any canes resulting into the blind buds. To avoid these following measures can be taken:

1. Irrigation to the vineyards 2-3 days before foundation pruning. This will help for active sap movement in the vines. Irrigating the vines will create enough moisture in the root zone.
2. Cover the vines with shade nets or gunny cloth. This will reduce the temperature in the vineyard thus supporting for early bud sprouts.

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	Nil

- There is no disease risk in majority of the grape areas due o high temperatures and very low RH.
- There is a possibility of drop in temperature compared to last week by about 5 °C in all he grape areas and it may remain blow 40°C except Solapur where it is predicted around 41-42°C. Possibility of cloudy conditions and light rains in bordering areas of Maharashtra and Karnataka such as Jath, Miraj, Sangli and Bijapur after 26^{th} April, 2017. Therefore, in vineyards wherever the pruning is yet to be done, the farmers are advised to wait for one more week so as to coincide the pruning with light showers and resultant moderate weather which may help in uniform sprouting.

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

1. Pest risks for unpruned vineyards : High risk of mealybugs and mites

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2. Pest risks for pruned vineyards: High risk of mealybugs

- Vineyards where harvesting is over and are yet to prune, care should be taken for management of mites and mealybugs
- The newly pruned vineyards should carefully be observed for mealybug infestation.
- Spot application of buprofezin 25 SC @ 1.25 ml/L may be given to control localized infestations of mealybugs.
- In case of unpruned vineyards, spray application of sulphur 80 WDG @ 1.5-2.0 g/L water may be given to prevent leaf-fall due to mite infestation.
- A water spray @ 1000 lit/acre before miticide spraying will be helpful in removing mite webbings and better coverage of sprayed chemical

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.