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 (13/04/2017) - Thursday (20/04/2017)

Location	Temperature		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nasik	23-27	38-41	**No Rain** Nasik, Ojhar, Pimpalgaon Baswant, Vani, Palkhed, Dindori, Shirdi, Loni, Rahata, Niphad, Kalwan, Devla, Lasalgaon, Satana.	Clear	06-24	10-14	22-56
Pune	24-26	37-42	**No Rain** Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Yavat, Rahu, Patas, Pargaon, Supa, Baramati, Narayangaon, Junnar.	Clear	06-21	07-24	20-66
Solapur *	27-29	41-43	**No Rain** Solapur, Nanaj, Kati, Atpadi, Vairag, Pandharpur, Kasegaon, Barshi, Pangri, Kari, Latur, Ausa, Osmanabad, Tuljapur.	Clear	06-27	06-10	16-45
Sangli *	24-26	39-42	**No Rain** Sangli, Miraj, Shirol, Arag, Shirguppi, Kagvad, Kavate Mahankal, Palus, Valva, Palsi, Shetfal, Vite, Khanapur	Clear	06-26	07-12	48-76
Bijapur *	26-27	40-42	**No Rain** Bijapur, Tikota, Telsang, Chadchan	Clear	03-26	08-11	18-68
Hyderabad *	23-27	39-41	**No Rain** Hyderabad, Medchal, Rainlaguda. Zahirabad	Clear - Partly Cloudy	03-21	11-23	47-92

*** 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:

b) Expected growth stage of the crop: Forward pruning

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

Expected pan evaporation: 8 to 11 mm

Amount of irrigation advised

1. Rest period: As the temperatures are increasing, there is need to provide need based irrigation to protect the existing leaves from drying and these leaves will 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.
2. After Foundation pruning, apply 13,600 to 17,000 L/acre per day during shoot growth stage for vineyards in Nasik, Pune and Hyderabad regions. For Solapur, Sangli and Bijapur, apply 15,300 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. 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)

No recommendations as on date.

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

Grafted vines

Once the trunk is developed, the process of cordon development needs to be initiated. Irrespective of the training system, the shoot trained as trunk should be pinched at the first wire. The growing shoot to be pinched 2 to 3 inch below the first wire. After the pinching, the side shoots will sprouts and will get proper direction for cordon development. The care should be taken while developing the cordon that the intermodal distance of the cordon shoot should be 2.5 to 3 inch. This will help in future to reduce the cost on shoot thinning after foundation pruning. To achieve the longer inter nodes, the nitrogenous fertilizers and irrigation need to be supplied to the vine efficiently.

.

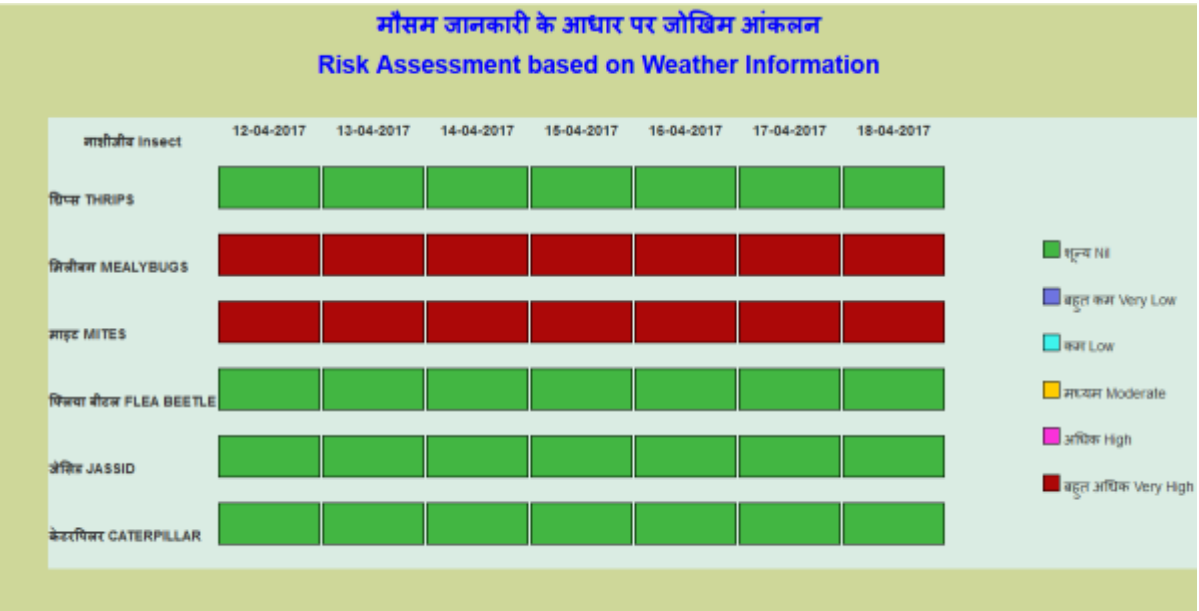
VII. Disease management (Dr. S.D. Sawant and Dr. Sujoy Saha)

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

As most of the places will have a temperature above 40^0C pruning should be undertaken in cloudy conditions and water spray should be given to the arms between 12 noon and 2PM. Dry heat being on the increase there will be delay in sprouting of the vines especially those facing the sun. There might be a prevalence of sunburn or woodiness in the vines. In places where high salt concentration in soil is reported, there can be an incidence of twig blight i.e the early pruned shoots might be blighted. This should ***not be confused*** with any disease symptom as it is due to accumulation of excess salts. This accumulation is due to high temperature and wind velocity resulting in high transpiration rate. Different source of water may be used for irrigation and wind breakers along with shade should be set up.

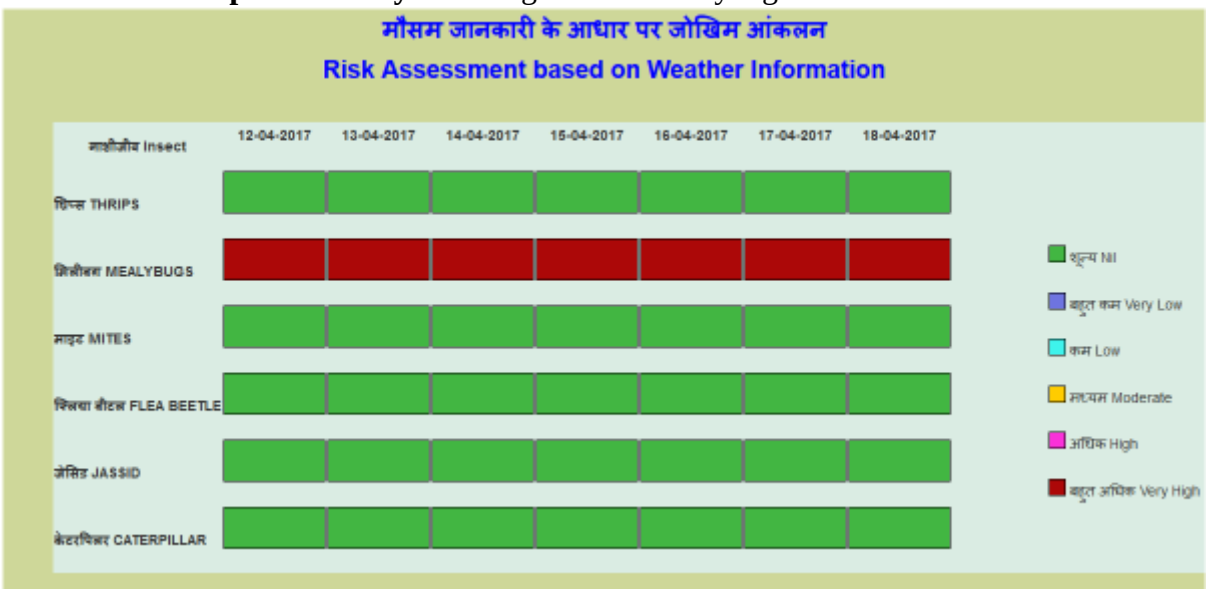
VIII. Insect and Mite management. (Dr. D.S. Yadav and Dr. B.B Fand)

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



.

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.