

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 (08/12/2016) - Thursday (15/12/2016)

Location	Temperature		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nasik	14-16	29-31	No Rain Nasik, Ojhar, Pimpalgaon Baswant, Vani, Palkhed, Dindori, Shirdi, Loni, Rahata, Niphad, Kalwan, Devla, Lasalgaon, Satana.	Clear	03-11	20-39	52-71
Pune	16-21	29-31	No Rain Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Yavat, Rahu, Patas, Pargaon, Supa, Baramati, Narayangaon, Junnar.	Clear-Partly cloudy	03-16	17-45	51-70
Solapur	17-22	30-33	No Rain Solapur, Nanaj, Kati, Atpadi, Vairag, Pandharpur, Kasegaon, Barshi, Pangri, Kari, Drizzling to Light Rain Wed-Thu Latur, Ausa, Osmanabad, Tuljapur.	Clear-Partly cloudy	06-19	16-48	50-79
Sangli	17-21	30-32	No Rain Sangli, Miraj, Shirol, Arag, Shirguppi, Kagvad. Kavate Mahankal, Palus, Valva, Palsi, Shetfal, Vite, Drizzling Tue - Thu Khanapur	Clear-Partly cloudy	03-19	15-47	48-69
Bijapur	17-21	29-31	No Rain Bijapur, Tikota, Telsang, Chadchan	Clear-Partly cloudy	06-21	17-54	62-85
Hyderabad	15-21	28-30	Drizzling Tue - Thu Hyderabad, Medchal, Rainlaguda. Zahirabad	Clear-Mostly cloudy	06-21	37-64	63-93

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: 25 to 50 days

b) Expected growth stage of the crop: - Bunch elongation to berry set

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

Expected pan evaporation: 4 to 6 mm

Amount of irrigation advised

For October pruned vineyards, during Flowering to setting stage, apply irrigation through drip @ 2800 L/ acre/ day for Nasik, Pune, Bijapur and Hyderabad regions and from 3360 L/ acre/

day for other regions. Further, in case vigour is more than desired, then reduce irrigation water application by half to 1250 L/ acre for Nasik, Pune, Bijapur and Hyderabad regions and 1680 L/acre for other regions.

During Berry growth stage, apply irrigation through drip @ 6,800 to 8,500 L/ acre/ day for Nasik, Pune, Bijapur and Hyderabad regions and from 8,500 to 10,200 L/ acre/ day for other regions.

In late pruned vineyards (Nov., 2016), during shoot growth stage, apply irrigation through drip @ 6800 to 8500 L/ acre/ day for Nasik, Pune, Bijapur and Hyderabad regions and from 8500 to 10,200 L/ acre/ day for other regions. Further, in case vigour is more than desired, then reduce irrigation water application to 3400 L/ acre/ day for Nasik, Pune, Bijapur and Hyderabad regions and 5000 L/acre/ day for other regions. Still if you are not able to control the vigour, stop irrigation till such time vigour is controlled.

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

October pruned vineyard

1. After Berry setting, continue initially with Phosphoric acid application @ 7.5 kg in two splits this week.
2. Spray Calcium @ 2g Calcium Chloride or 0.5 g Ca chelate per litre at berry size of 2-4 mm and 6-8 mm.
3. After 15 days after setting (around 60-65 days), start application of ammonium sulphate @ 20 kg/acre in 3splits followed by application of 0-0-50 through drip @ 20 kg in 3 splits
4. If the soil has high calcium carbonate content, apply 5 kg Zinc sulphate along with 5 kg Ferrous sulphate in two splits.
5. In the calcareous soil, spray magnesium sulphate @ 3g/L on the vines followed by fertigation of magnesium sulphate @ 10kg/acre.
6. 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.

November pruned vineyard

1. 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. If during foundation pruning, the petiole test stated that boron was deficient then apply boric acid @ 1.5 kg to 5 kg depending upon the soil test value. Apply one kg boric acid at a time.
2. Apply 10 kg Magnesium sulphate per acre if the crop is between 5 leaf to prebloom stage.
3. If sodicity problem is there, apply 10 kg Sulphate of potash per acre in 2 splits this week.
4. Donot apply any nitrogen based fertilizer from 4-5 days before Flowering to Setting stage to avoid problems of kooj (inflorescence necrosis). Apply 5 kg Phosphoric acid in two splits this week.
5. During flowering petiole testing should be carried out.

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

After berry set, bunch dipping in GA3 @ 40 ppm with CPPU @ 2ppm needs to be done for berry elongation and increase in berry size. Immediately after the bunch dipping, berry thinning needs to be undertaken. This will help to utilize the available food material and increase in berry size through the source:sink balance. Production of loose bunch can also be achieved by berry thinning. Removal of alternate rachis in the condition of loose bunch or removal of two rachis alternatively under the condition of compact bunch will help to achieve loose bunch with bold berries in near future.

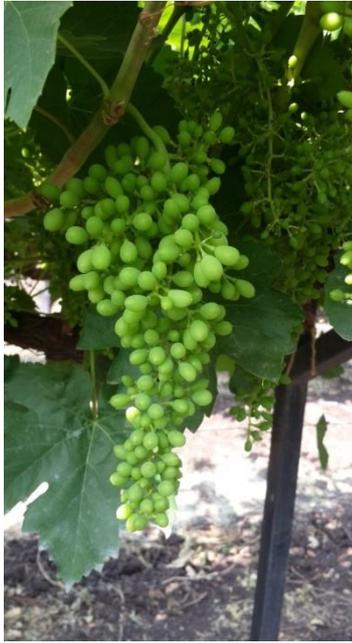


Fig. 1. Compact bunch



Fig. 2. Well thinned bunch

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

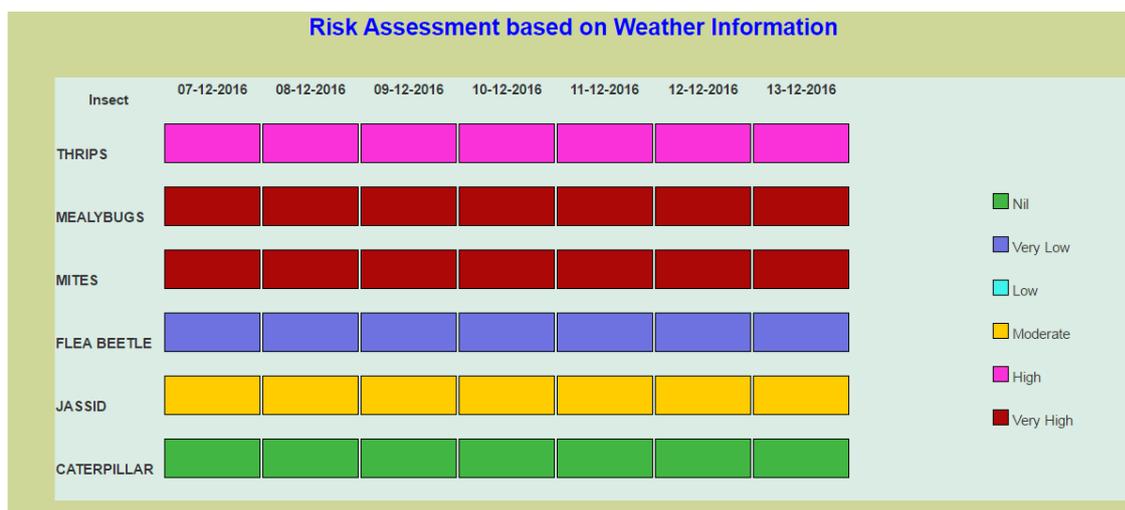
The scion grafted on rootstock during August-September will be either semi-matured or matured at this time. The growth of all grafted plants will not be uniform in the field. There will be variation in the growth as well as maturity. Hence, the re-cut of grafted vines will be taken in January-February depending on the weather condition during that time. For re-cut, the shoots need to be matured, hence application of potashic fertilizer (SOP through soil or 0:0:51 @ 3-4 g/litre through spray) and control of irrigation water will help to achieve the shoot maturity.

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

Days after pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracoze	Others (specify)
53-59	Nil	Low – medium	Nil	Nil

In Sangli region, cold conditions are going to prevail and precautions should be undertaken for powdery mildew. Spraying of sulphur@2g/L is advised. During next Wed-Thursday, there is a probability of rains in Sholapur-Sangli region and a spray of Iprovalicarb + Propineb or Mandipropamid 23.4% SC or Ametoctradin +Dimethomorph or Dimethomorph +Mancozeb or Cymoxanil+Mancozeb WP or Potassium salt of phosphoric acid needs to be done prior to that. For powdery mildew management after berry set, application of sulphur@2g/L is advised. If the infection of powdery mildew is already existent in the vines application of myclobutanil@ 0.4g/L or tetraconazole @ 0.75 ml /L will provide good control of the disease. The application of biocontrol agents like *Bacillus* sp @ 2g/L or *Trichoderma* sp @4g/L or *Ampelomyces* sp @ 4-5g/L may be continued.

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



A. Pest risks:

- Very high risks of infestation of mealybugs mites
- High risk of infestation of thrips, moderate risk of jassids
- Drizzling in some areas like Sangli, Hyderabad: low to moderate risk for caterpillars and flea beetles

B. Integrated options for management:

- Use of Neem based products will be helpful for controlling sucking pests: thrips, mealybugs, jassids and mites
- Application of entomopathogenic fungi, *Beauveria bassiana* + *Lecanicillium lecanii* (2×10^8 spores/ml) @ 5.0 + 5.0 mL/L twice at fortnightly interval may help to check the population of thrips, mealybugs and jassids. The efficacy is dependent on temperature and relative humidity conditions. The efficacy will be low under drier conditions. However, expected drizzling rains in some areas may enhance the control by these entomopathogenic fungi.
- Installation of light traps for controlling jassids and moths of caterpillars. Run the light traps for 3 hours daily, during evening between 7.00 pm – 10.00 pm for maximum catch efficiency.
- Apply buprofezin @ 1.25 ml/lit for controlling mealybugs. Spraying will be useful for controlling mealybugs on foliage and developing bunches whereas plant wash (water volume 1.5 lit/vine) will help to manage mealybugs on stems and cordons.
- Lambda cyhalothrin 5 EC @ 0.5 ml/lit will be helpful against jassids, flea beetle and caterpillars
- Emamectin benzoate 5 SG @ 0.22 g/lit against thrips and caterpillars
- Sulphur 80 WDG @ 2 g/lit for controlling mites. If heavy infestation of mites is seen, give jet spray of water @ 2500 litres/ha before spraying of miticides, which will help to remove the mite webbings and improve the efficacy of miticide sprayed.
- Conservation of native coccinellid predator *Stethoras rani* by avoiding indiscriminate use of chemicals like imidacloprid will help to control mites, naturally.

*Avoid use of imidacloprid at flowering period and after 50 days of fruit pruning.

**Fipronil should be used only once in a fruiting season and should be avoided after flowering period

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.