

# 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 (01/12/2016) - Thursday (08/12/2016)

Location	Temperature		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
<b>Nasik</b>	16-18	31-32	<b>No Rain</b> Nasik, Ojhar, Pimpalgaon Baswant, Vani, Palkhed, Dindori, Shirdi, Loni, Rahata, Niphad, Kalwan, Devla, Lasalgaon, Satana.	Clear-Partly cloudy	05-11	20-39	52-72
<b>Pune</b>	17-21	31-32	<b>No Rain</b> Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Yavat, Rahu, Patas, Pargaon, Supa, Baramati, Narayangaon, Junnar.	Clear-Partly cloudy	02-24	21-46	53-76
<b>Solapur</b>	18-23	33-34	<b>No Rain</b> Solapur, Nanaj, Kati, Atpadi, Vairag, Pandharpur, Kasegaon, Barshi, Pangri, Kari, Latur, Ausa, Osmanabad, Tuljapur.	Clear-Partly cloudy	10-23	15-41	46-75
<b>Sangli</b>	18-23	32-34	<b>Drizzling Sat</b> Sangli, Miraj, Shirol, Arag, Shirguppi, Kagvad. <b>No Rain</b> Kavate Mahankal, Palus, Valva, Palsi, Shetfal, Vite, Khanapur	Clear-Partly cloudy	06-26	18-45	48-86
<b>Bijapur</b>	17-21	31-32	<b>No Rain</b> Bijapur, Tikota, Telsang, Chadchan	Clear-Partly cloudy	08-26	17-25	36-57
<b>Hyderabad</b>	16-21	29-31	<b>Drizzling Fri</b> Hyderabad, Medchal, Rainlaguda. <b>No Rain</b> Zahirabad	Clear-Mostly cloudy	02-11	25-36	54-76

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.

##### **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)**

As the crop is around 45-50 days old, and most of the vines are in flowering stage, it is advised not to use any phyto-hormones as it might lead to flower drop.

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

Under the condition of clear weather, powdery mildew incidence may spread at higher intensity under dense canopy. Hence, training of shoots on wire will help to make open canopy and ease in spray coverage.

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

Days after pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
45-52	Nil	Low – medium	Nil	Nil

Both Pune and Solapur will experience cloudy conditions while Sangli will have low temperature (around 9-10°C) with early morning dew/fog. Monitoring for downy mildew infection is necessary although spraying may not be taken at this stage. If there is an existence of thick canopy, it should be thinned out for air passages so that there is no buildup of humidity. High humidity will aggravate powdery mildew infection. In vines at pre-flowering stage, application of triazoles like Difenconazole @0.5ml/L or hexaconazole @ 1ml/L or flusilazole @ 12.5ml/100L or Fluopyram + tebuconazole @0.5ml/l should be done while at post flowering stage, [dinocap@0.35mm/L](#) should be sprayed. 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. Application of Trichoderma formulations @4-5g/L, at this stage will also be beneficial. As observed in many vines, inward curling/rolling of leaves are predominant (A) which may be due to potassium deficiency and this might be detrimental as powdery mildew infection might increase (B). Hence, it is advised to mix potassium hydrogen carbonate@3-5g/L along with the triazoles during application. After berry set it is advised to restrict the spray of triazoles and use sulphur@2g/L.

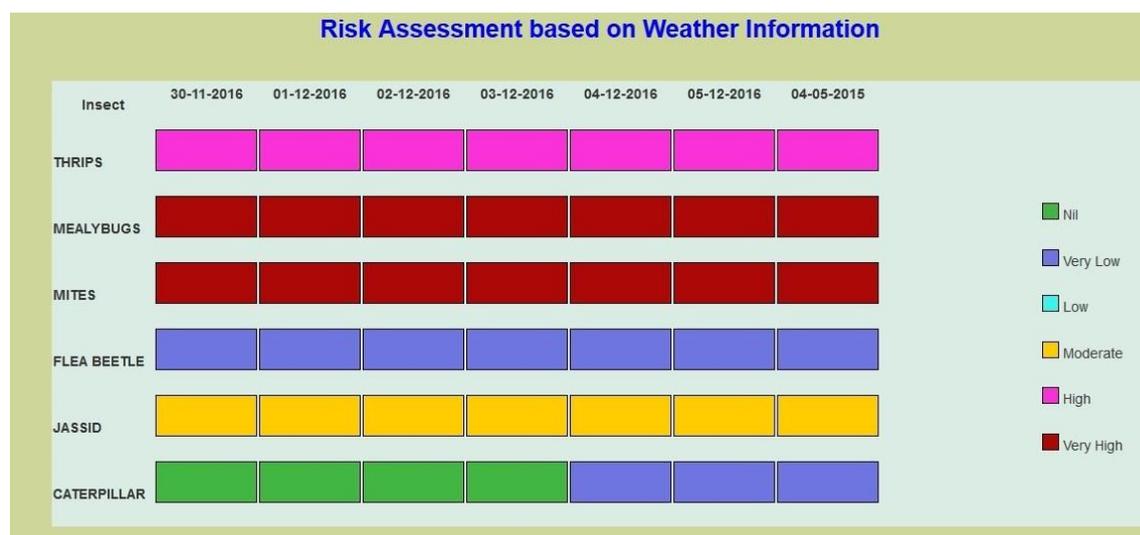


(A)



(B)

## 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* ( $2 \times 10^8$  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](mailto:director.nrcg@icar.gov.in).