# 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 (22/12/2016) - Thursday (29/12/2016)**

| Location | Temperature | | Possibility of Rain | Cloud Cover | Wind Speed (Km/hr) | R H% | |
|---|---|---|---|---|---|---|---|
| | Min | Max | | | | Min | Max |
| **Nasik** | 15-16 | 31-32 | **No Rain** Nasik, Ojhar, Pimpalgaon Baswant, Vani, Palkhed, Dindori, Shirdi, Loni, Rahata, Niphad, Kalwan, Devla, Lasalgaon, Satana. | Clear | 02-11 | 18-22 | 41-57 |
| **Pune** | 17-18 | 33-34 | **No Rain** Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Yavat, Rahu, Patas, Pargaon, Supa, Baramati, Narayangaon, Junnar. | Clear | 02-16 | 13-18 | 43-61 |
| **Solapur *** | 17-19 | 33-34 | **No Rain** Solapur, Nanaj, Kati, Atpadi, Vairag, Pandharpur, Kasegaon, Barshi, Pangri, Kari, Latur, Ausa, Osmanabad, Tuljapur. | Clear | 02-14 | 13-18 | 41-52 |
| **Sangli *** | 17-19 | 31-33 | **No Rain** Sangli, Miraj, Shirol, Arag, Shirguppi, Kagvad, Kavate Mahankal, Palus, Valva, Palsi, Shetfal, Vite, Khanapur | Clear | 06-24 | 12-50 | 51-90 |
| **Bijapur *** | 18 | 32-33 | **No Rain** Bijapur, Tikota, Telsang, Chadchan | Clear | 03-16 | 13-20 | 39-55 |
| **Hyderabad *** | 15-16 | 31-32 | **No Rain** Hyderabad, Medchal, Rainlaguda. Zahirabad | Clear | 02-14 | 17-28 | 54-82 |

*** 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: 25 to 60 days

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

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

Expected pan evaporation: 3 to 5 mm

**Amount of irrigation advised**

For October pruned vineyards, during berry growth stage, apply irrigation through drip @ 5,100 to 8,500 L/ acre/ day.

In late pruned vineyards (Nov., 2016), During Flowering to setting stage, apply irrigation through drip @ 1,700 to 2,850 L/ acre/ day. After berry setting, apply irrigation through drip @ 5,100 to 8,500 L/ acre/ day..

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

**October pruned vineyard**

1. If the soil has high calcium carbonate content, apply 5 kg Zinc sulphate along with 5 kg Ferrous sulphate in two splits.
2. In the calcareous soil, spray magnesium sulphate @ 3g/L on the vines followed by fertigation of magnesium sulphate @ 10kg/acre.
3. 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. Do not 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.
2. During flowering stage, petiole testing should be carried out.
3. After Berry setting, continue initially with Phosphoric acid application @ 7.5 kg in two splits this week.

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

If both the applications of GA and CPPU are over as advised last week there is no need to repeat but if response is not adequate then application of both the growth regulators are advised at a lower dose. If only one spray/dip is completed, second application should be done appropriately. Before application of these PGRs, at least one micronutrient spray or sea weed extract spray should be done to get maximum benefit from these chemicals.

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

1. **Establishment of new vineyard**: Trench opening for the planting of rootstock should be initiated now. The spacing for trench opening should be based on the soil type. It can be 10 feet between rows and six feet between two plants for heavy soils while 9 feet between the two rows and 5 feet between two vines under light, murum soil.
2. **Grafted vines**: The re-cut of grafted vines will be taken when the minimum temperature starts rising above $15^0$C. This condition will be available during January first week in Sangli and Solapur. Hence, pre re-cut practices to be followed. Approximately 6-8 leaf removal from graft joint can be done. Removal of sutali from grafted shoot (2- buds above the graft joint) and allowing bending towards the soil. This will help for proper bud swelling and accumulation of stored food material in the bud. Opening of light trench (3 to 4 inch deep and 2 feet width leaving 8 to 9 inch from the trunk) 15 days before re-cut may be done. Application of well rotten FYM @ 10 kg/grafted/vine along with ferrous sulphate @ 15-20g/vine and single super phosphate @ 200- 250g/vine) will help for proper root and shoot growth.

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

| Days after pruning | Risk of diseases | | | |
|---|---|---|---|---|
| | Downy mildew | Powdery mildew | Anthracnose | Others (specify) |
| 60-66 | Nil | Low – medium | Nil | Nil |

In most of the vines which are at a fruit-set stage, for powdery mildew management, myclobutanil@ 0.4g/L or Difenoconazole@ 0.5ml/L or tetraconazole @ 0.75 ml /L should be applied(detections of residues possible) To avoid residue detections, application of sulphur 80WP@2g/L is advised. Dusting of sulphur 80WP@ 2.5-3kg/acre should be done, if canopy growth is dense. Observations should be made for the incidence of powdery mildew in *Parijat* or *Tulsi* plants and if the incidence is visible, application of Trichoderma formulations or *Ampelomyces quisqualis* @4-5g/L or Bacillus sp @2g/L should be done on these plants. It will facilitate their multiplication and they will,in turn, help in the control of powdery mildew in vines.

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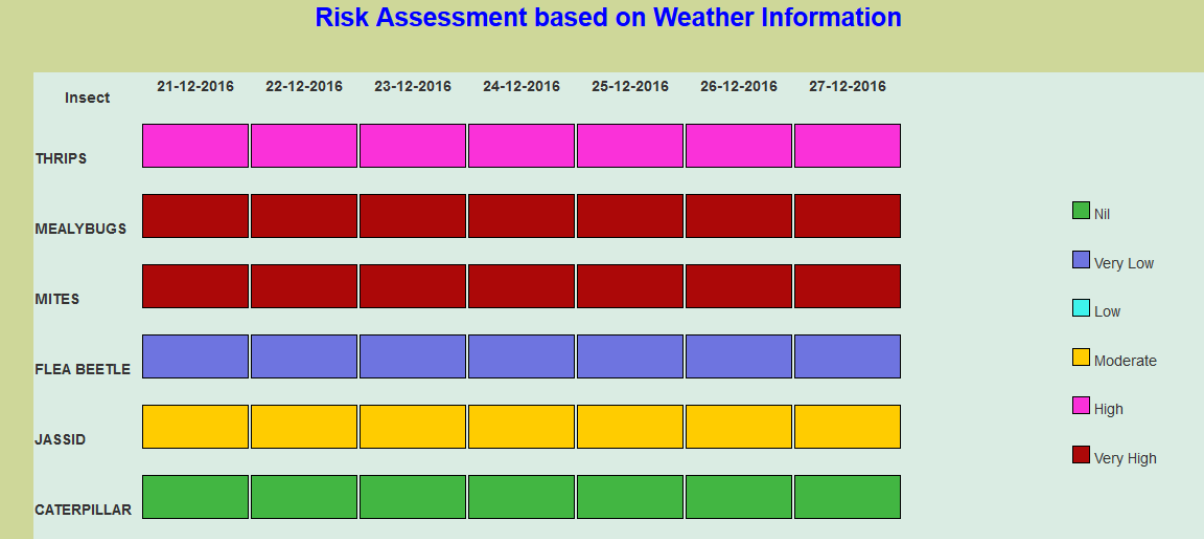
## VIII. Insect and Mite management. (Dr. D.S. Yadav and Dr. B.B Fand)




### *A. Pest risks:*

- Very high risks of infestation of mealybugs and mites
- High risk of infestation of thrips
- Moderate risk of jassids
- ***Unprecedented risk of aphid colonization***

*i. In search of alternate food plants, the migration of aphids (polyphagous sucking insect) is seen commonly in winter months (December-January)*

*ii. Aphid infestations on growing tender parts, flowers and developing bunch may be seen in some grape growing areas*

*iii. The growers are advised to keep close watch on appearance of any kind of damage symptoms and take control measures accordingly*

*iv. The control measures for other sucking pests of grapes are applicable*

**B. Safer options for management:**

- Applications of entomopathogeic fungi, *Beauveria bassiana* + *Lecanicillium lecanii* ($2x10^8$ spores/ml) @ 5.0 + 5.0 mL/L twice at fortnightly interval for control of mealybugs, thrips and jassids. This will also help to manage aphid infestations. However, due to low relative humidity conditions, the establishment and efficacy of entomopathogenic fungi may be less. Hence spraying should preferably carried out during evening hours and using higher water volume per acre than normal
- Spray application of neem based products with Azadirachtin as an active ingredient will be helpful for controlling sucking pests: mealybugs, mites, jassids and thrips. This will also be safer for predatory lady bird beetles that are normally expected to colonise on mealybug and aphid populations
- Conservation of lady bird beetle *Stethoras rani* predacious on mites by avoiding indiscriminate use of chemicals like imidacloprid will help to control mites, naturally.

**C. Insecticides for controlling pests**

- 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
- 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
- Emamectin benzoate 5 SG @ 0.22 g/lit against thrips and caterpillars
- Lambda cyhalothrin 5 EC @ 0.5 ml/lit will be helpful against jassids, flea beetle and caterpillars

*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