

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 12/01/2017) - Thursday (19/01/2016)

Location	Temperature		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nasik	13-18	27-30	No Rain Nasik, Ojhar, Pimpalgaon Baswant, Vani, Palkhed, Dindori, Shirdi, Loni, Rahata, Niphad, Kalwan, Devla, Lasalgaon, Satana.	Clear	00-16	22-37	56-79
Pune	16-19	29-32	No Rain this week but Light to Moderate rain in Next week Pune, Phursungi, Loni Kalbhor, Uruli Kanchan, Yavat, Rahu, Patas, Pargaon, Supa, Baramati, Narayangaon, Junnar.	Clear	00-14	23-32	51-71
Solapur *	18-22	31-33	No Rain this week but Light to Moderate rain in Next week Solapur, Nanaj, Kati, Atpadi, Vairag, Pandharpur, Kasegaon, Barshi, Pangri, Kari No rain Latur, Ausa, Osmanabad, Tuljapur.	Clear	03-26	21-30	51-67
Sangli *	17-21	31-33	No Rain this week but Light to Moderate rain in Next week Sangli, Miraj, Shirol, Arag, Shirguppi, Kagvad, Kavate Mahankal, Palus, Valva, Palsi, Shetfal, Vite, Khanapur	Clear	00-23	20-29	51-76
Bijapur *	18-21	30-32	No Rain Bijapur, Tikota, Telsang, Chadchan	Clear	05-29	21-29	54-79
Hyderabad *	16-17	29-31	No Rain Hyderabad, Medchal, Rainlaguda. Zahirabad	Clear	06-19	27-37	64-100

* 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: 60 to 90 days

b) Expected growth stage of the crop: - Berry growth to veraison

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

Expected pan evaporation: 3.5 to 5 mm

Amount of irrigation advised

For October pruned vineyards, during berry growth stage, apply irrigation through drip @ 5,950 to 8,500 L/ acre/ day.

In late pruned vineyards (Nov., 2016), during flowering to setting stage, apply irrigation through drip @ 2,000 to 2,800 L/ acre/ day. After berry setting, apply irrigation through drip @ 5,950 to 8,500 L/ acre/ day.

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

October pruned vineyard

1. Berry development stage: Apply Sulphate of potash or 0-0-50 @ 25 kg/ acre in 3-4 splits for next two weeks. If the soil has high calcium carbonate content, apply 5 kg Zinc sulphate along with 5 kg Ferrous sulphate in two splits.
2. Ripening to Harvest stage: Apply Sulphate of potash or 0-0-50 @ 25 kg/ acre in 3-4 splits for next two weeks. Follow this up with Magnesium sulphate @ 10 kg/acre in two splits. Spray Magnesium sulphate in calcareous soil.

November pruned vineyard

1. Flowering to setting stage: Apply 5 kg Phosphoric acid in two splits this week. During flowering stage, petiole testing should be carried out.
2. After Berry setting, continue initially with Phosphoric acid application @ 7.5 kg in 2-3 splits this week. Apply Magnesium sulphate @ 10 kg/acre in two splits. Spray Calcium @ 2g Calcium Chloride or 0.5 g Ca chelate per litre at berry size of 2-4 mm and 6-8 mm.

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

Sun burn causes grape berry surfaces to become brown and possibly shriveled. These symptoms appear on the portions of the cluster exposed to direct sunlight. Grapes are most susceptible to sunburn from pea size to just before veraison (colouring). During this stage one must ensure protection of grapes. Under the situation of reduced canopy, bunches should be protected by covering them with paper bags or shed net.

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

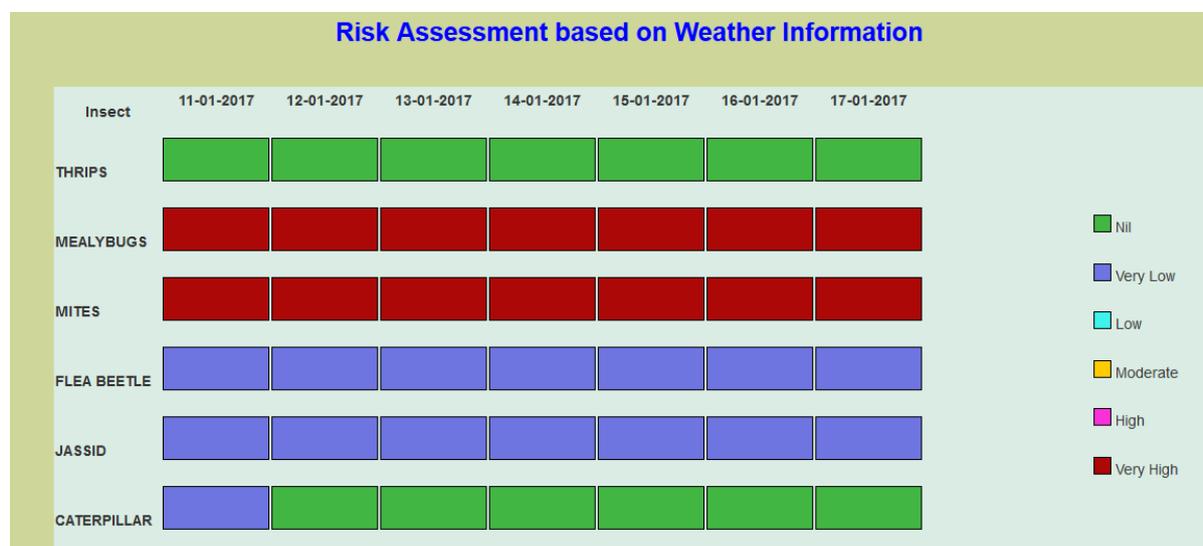
1. **Establishment of new vineyard:** Trench opening for hard murum soil and early ploughing in case of black soil can be done for new planting. Trench filling with sugarcane trash, bagasse, well rotten FYM and super phosphate should be done and subsequently covered with soil. The trench should be irrigated thoroughly to wet the soil and sink the soil. At wapsa condition planting of rootstock should be done.
2. **Grafted vines:** Approximately 6-8 leaf removal from graft joint can be done manually. Application of ethephon @ 3ml/L, 12-15days in advance will help for bud-sprout after re-cut. It is advised not to do a re-cut this week as temperature is below 10⁰C in most of the areas.

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

Days after pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthracnose	Others (specify)
81 -87	Nil	Low – medium	Nil	Nil

Northern Nashik region will remain cloudy from Fri-Monday. The night temperature is on the rise with an increase in humidity and hence, the probability of powdery mildew incidence might increase. For powdery mildew management, myclobutanil@ 0.4g/L or tetraconazole @ 0.75 ml /L should be applied(if at least 45 days are remaining for harvest) Application of sulphur 80WP@2g/L is advised to avoid residue detections. Use of biocontrol agents like *Bacillus* sp/*Trichoderma* sp/*Ampelomyces* sp may be continued. If the diurnal variation of temperature is around 20⁰C and berries are in the veraison stage, prior to their covering, they should be sprayed with *Bacillus subtilis*@ 3-4g/L which will not only control powdery mildew but will also aid in bioremediation. Due to Western disturbances grape growing regions might have rainfall from 15th Feb onwards and preparations should be made accordingly.

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

B. Management measures:

- **Use of insecticides with low PHI should be preferred to avoid residue problems**
- Close monitoring is required for the presence of mealybug egg masses, appearance of honeydew on bunches, movement of crawlers and ants on stems and cordons, especially below the loose bark.
- Loose bark on stems and cordons should necessarily be removed for making the effective contact of insecticide with the insects
- Spray application of neem based products (Azadirachtin) water will be helpful for controlling sucking pests: mealybugs, mites and thrips.
- Plant wash with buprofezin @ 1.25 ml/lit (water volume 1.5 lit/vine) will help to control mealybugs. Please consider the PHI of insecticide before use.

- 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

Recommended insecticides with their MRLs and PHIs

(Source: Annexure 5, NRL, ICAR-NRCG, Pune)

S. No.	Insecticide	EU MRL(mg/kg)	PHI (days)
1.	Emamectin benzoate 05 SG	0.05	25
2.	Buprofezin 25 SC	1	40

*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.