

मौसम पूर्वानुमान आधारित साप्ताहिक सलाह

Weather Forecast Based Weekly Advisory

(Assumption: Foundation Pruning date - 15/04/2017)

I. Weather Data for the Prevailing Week

Thursday (12/10/2017) - Thursday (19/10/2017)

Location	Temperature (°C)		Possibility of Rain	Cloud Cover	Wind Speed (Km/hr)	R H%	
	Min	Max				Min	Max
Nasik*	21-22	30-32	Nashik, Ojhar, Palkhed, Dindori Niphad, Shirdi, Loni Vani , Pimpalgaon Kalwan, Devla, Baswant, Satana Light Rain- Thu Drizzling- Fri & Sat	Partly Cloudy	01-14	45-64	78-93
Pune*	21-22	26-33	Pune, Phursungi Loni Kalbhor Drizzling- Thu, Fri & Sun Light Rain- Sat Uruli Kanchan, Yavat, Patas, Supa, Baramati, - Drizzling Fri Light Rain- Thu & Sat Narayangaon, Junnar Drizzling - Fri & Sat Good Rain- Thu	Partly Cloudy	00-17	48-65	83-92
Solapur*	22- 25	27-33	Solapur, Nanaj Drizzling- Fri Light Rain- Thu & Sat Kati, Vairag Drizzling- Fri Light Rain- Sat Good Rain- Thu Osmanabad, Latur, Ausa, Tuljapur Kasegaon, Atpadi Pandharpur Drizzling – Thu & Fri, Light Rain- Sat Barshi, Pangri, Drizzling- Fri, Light Rain- Thu & Sat	Partly Cloudy	03-16	38-65	67-94
Sangli*	21-22	30-32	Sangli, Miraj, Shirguppi, Kagvad, Arag Drizzling- Thu to Sat & Mon, Good Rain- Sun Kavatha Mahankal, Light Rain- Thu & Fri Good Rain- Sat Palus, Valva, Tasgaon, Drizzling- Fri Light Rain- Thu & Fri Khanapur, Vite, Shetfal Drizzling- Thu & Sat Drizzling- Fri Palsi Drizzling- Fri Light Rain- Thu & Sat	Partly Cloudy	03-14	40-69	83-100
Bijapur*	22-23	30-32	Bijapur, Tikota, Telsang Drizzling - Fri Light Rain- Thu, Sat & Sun Chadchan Drizzling - Fri Light Rain- Thu & Sat	Partly Cloudy	06-17	40-68	79-97
Hyderabad*	21-23	29-30	Hyderabad, Medchal Light Rain- Thu to Sun Zahirabad Drizzling - Thu & Sun Light Rain- Fri & Sat	Partly Cloudy	01-14	77-81	95- 100

*Thunderstorm

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..

III. Nutrition and irrigation management (Dr. A.K. Upadhyay)

Water management

Pan evaporation: 5-6 mm

1. All the grape growing regions are forecasted to receive from drizzle to light rains. Generally, under wapsa (field capacity) condition of the soil, donot apply irrigation. In general, there will not be any need to provide irrigation in areas which have witnessed continuous rains since last 3-4 days.
2. During shoot growth stage (fruit pruning season), apply irrigation only if necessary and vines show cupping symptoms. Already most of the areas have received rains. For vineyards raised on heavy soils, there is no need to apply irrigation atleast for 3-4 days as the soil is saturated with water. In case, the vine leaves show cupping symptoms, apply irrigation through drip @ 8500- 10,600 L/ acre/ day. Further, in case vigour is more than desired, then reduce irrigation water application by half to 4200 - 5300 L/ acre.
3. If the rootzone is saturated then donot apply any fertilizer. Growth will be slow, donot worry as and when the soil comes into field capacity (wapsa), root activity will increase and the growth will progress. After that only fertilizer is required.

Nutrient management:

1. If Fruit pruning is scheduled in next fortnight, test vineyard soil and irrigation water and plan nutrient management accordingly. Also during planning look into the petiole test carried out in the previous season. Issues like petiole sodium content exceeding 0.5% warrants urgent attention in the coming season.
2. Look for the sodicity problems. Soil, petiole and water reports will give information on extent of build up of sodicity in soil. Apply gypsum to the soil for removal of sodium from the soil exchange complex. In case of calcareous soils, use sulphur for similar purpose. Gypsum/sulphur should be properly mixed in soil. The soil should be moist. After approx. 20 days adequate should be provided to leach sodium from the soil.
3. If soils are calcareous in nature, then apply 50 kg sulphur between the vines in the soil. If calcium carbonate content is more than 15 % apply 100 kg sulphur per acre in the root zone. The sulphur should be properly mixed in the soil for improving its efficacy in taking care of calcium carbonates. The efficacy of sulphur is improved if FYM/ Compost are applied along with sulphur and mixed in the soil.
4. Efforts should be made to reduce the soil pH (pH exceeding 7.6). Apply less decomposed organic matter sources like FYM or green manure like Dhaincha etc. to the soil before pruning. Elemental sulphur @ 25-50 kg/acre could lead to more reduction in soil pH values.
5. Apply FYM/ other organic sources including green manuring atleast 12-15 days before pruning. If possible mix 200 kg Single super phosphate in the FYM and apply in the soil especially in case of sodic soils. Application of organics improves the nutrient and water retention in the root zone and reduces nutrient losses from the profile.

September pruned vineyards (Fruit Pruning Season)

Shoot growth stage:

1. Based upon the soil test value, during shoot growth stage apply urea @ 15kg / acre this week in two splits. If the soil is calcareous, instead of urea apply ammonium sulphate @ 20 kg/ acre in two splits this week. Depending upon the crop vigour, regulate nitrogen application.
2. 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 boron @ 1.5 kg to 5 kg depending upon the soil test value. Apply one kg boron at a time.

3. Apply 10 kg Magnesium sulphate per acre if the crop is between 5 leaf to prebloom stage.
4. If sodicity problem is there, apply 10 kg Sulphate of potash per acre in 2 splits this week.
5. If soils are calcareous, spray Sulphate of potash and Magnesium sulphate @ 2-3g/L depending upon leaf age during prebloom stage.

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

After Pruning application of Hydrogen cyanamide based on cane thickness has to be uniform sprouting.

Do not use of excess amount of hydrogen cyanamide or do not spray it on the vines

Use the hand gloves at the time application hydrogen cyanamide to avoid injuries to laborers

Application of hydrogen cyanamide should be applied on selected buds based on bud testing report

All the weeds should be removed, by hand weeding.

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

1. Old vineyard:

As per the weather prediction, temperature and relative humidity in the atmosphere will be most ideal for the build-up of fungal diseases. In the vineyard at pre bloom stage, downy mildew incidence on bunch will lead to loss of complete crop. Hence, priority may be given to keep the open canopy by excess shoot removal and also removal of side shoots. The removal of 2-3 basal leaf on each shoot will help to reduce the microclimate and also proper aeration that will lead to uniform spray coverage.

Bunch removal at proper stage will help to maintain the source: sink ratio. Retention of one bunch per sq.ft area allocated to each vine for local market, one bunch per 1.5 sq ft area for export while 2 to 2.5 bunches per sq ft for raisin making will help to achieve the objectives. Remaining bunches' can be removed during the pre-bloom stage only (before 25 days after fruit pruning).

2. Grafting on rootstock:

The grafting in the vineyard might have been completed during this stage. During bud sprouts, the damage of flea beetle will be seen. This pest will damage the bud leading to failure of graft success. Hence at the bud swelling stage, sprays of Fipronil @0.8g/L or spinosad @0.25ml/lit may be taken at recommended interval or after assessing the population of flea beetle in the vineyard. During heavy rainfall, we may not get any damage of flea beetle, however, immediately after the rains, as the temperature starts increasing, the population of flea beetle will be seen in the garden.

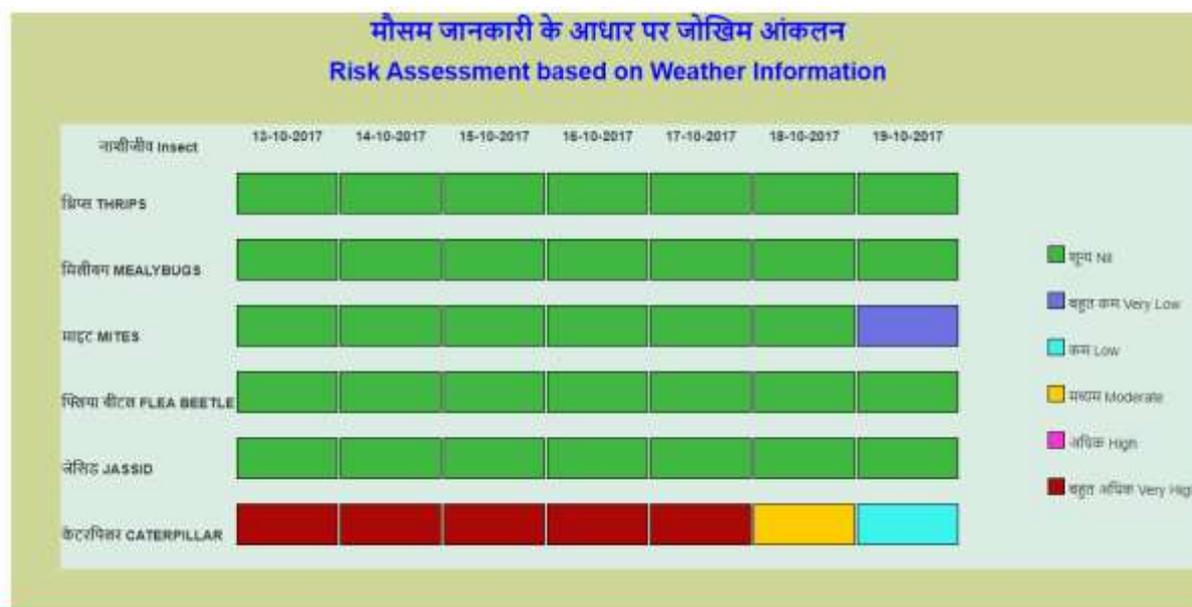
VI. Disease management (Dr. S.D. Sawant and Dr. Sujoy Saha)

Days after pruning	Risk of diseases			
	Downy mildew	Powdery mildew	Anthraco nose	Others (specify)
--	High	Low	Medium	Medium Bacterial leaf spot

The rains are predicted to be around 20-21st October and downy mildew management practices needs to be done during this period. Application of CAA fungicides at this stage viz. Dimethomorph 50WP@1g/L+mancozeb 75WP@2g/L or Iprovalicarb+propineb @ 2.25g/L or Mandipropamid@ 0.8g/L or Dimethomorph +ametoctradin@0.8g/L or Cymoxanil +Mancozeb WP@2g/L may be done for controlling downy mildew. Application of potassium salt of phosphoric acid @ 4g/L + Mancozeb mancozeb 75WP@2g/L will also give a good control of the disease. If the vines are in 'ponga' stage, dusting of Mancozeb @5-6kg/acre should be done. As anthracnose is also prevalent in newly emerging shoots, application of Thiophenate methyl 70 WP is advised. Incidence of bacterial leaf spot is also on the rise and application of streptomycin @ 1g/10 litres can be done. In areas where canopy growth is heavy application of triazoles may be done which will not only arrest the growth but also give a protection against powdery mildew, if any. Use of silicon-based spreader is advised with all fungicide sprays during this stage.

VII. Insect and Mite management. (Dr. D.S. Yadav)

Foundation pruning growth stage: Cane maturity and afterwards



- Caterpillar (*Spodoptera litura*) infestation may increase in most of the grape areas as humidity is increasing. For the management of caterpillars, emamectin benzoate 5 SG @ 0.22 g/litre or fipronil 80 WG @ 0.06 g/litre water may be given.
- Mite infestation may also be observed on older leaves. In such cases, foliar application of sulphur 80 WDG @ 2.0 g/litre water may be given.
- Mealybug population and movement of ants may be noticed under the bark. Due to possibility of rains and build-up of relative humidity, plant wash with entomopathogenic fungi viz. *Metarhizium*, *Beauveria* and *Lecanicillium* may be useful for controlling mealybugs and ants.
- Do not spray any broad spectrum insecticides such as chlorpyrifos, dichlorvos, methomyl, profenophos, etc. for mealybug control. Higher humidity will favour development of

natural enemies which will slowly kill mealybugs. In case chemical spray is required, prefer buprofezin 25 SC @ 1.25 ml per litre of water for plant wash.

- Incidences of new species of stem borer (red colour larva) may be noticed under bark in Sangali, Solapur, Nashik, Pune, Bijapur grape areas. Remove the loose bark and give good plant wash mainly targeting cordons and main trunk with broad spectrum insecticides, for example, lambda cyhalothrin 5 CS @ 2.5 ml/l.



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.